Evaluation of the Glasgow ‘Deep End’ Links Worker Programme
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### Abbreviations

<table>
<thead>
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<th>Description</th>
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<tr>
<td>Alliance</td>
<td>Health and Social Care Alliance Scotland</td>
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<tr>
<td>ALISS</td>
<td>A Local Information System for Scotland</td>
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<tr>
<td>CLP</td>
<td>Community Links Practitioner</td>
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<tr>
<td>CO</td>
<td>Community Organisations</td>
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<td>GP</td>
<td>General Practitioner</td>
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<tr>
<td>PM</td>
<td>Practice Manager</td>
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<td>PN</td>
<td>Practice Nurse</td>
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<tr>
<td>NPT</td>
<td>Normalisation Process Theory</td>
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<tr>
<td>RCGP</td>
<td>Royal College of General Practitioners</td>
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<tr>
<td>SAMH</td>
<td>Scottish Association for Mental Health</td>
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<tr>
<td>SD</td>
<td>Standard Deviation</td>
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<td>SDT</td>
<td>Self Determination Theory</td>
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<tr>
<td>SIMD</td>
<td>Scottish Index of Multiple Deprivation</td>
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<tr>
<td>The Programme</td>
<td>The Glasgow ‘Deep End’ Links Worker Programme</td>
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## Glossary

<table>
<thead>
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<th>Term</th>
<th>Definition</th>
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<tr>
<td>Comparison Practice</td>
<td>Practices that participated in this evaluation but that did not deliver the Links Worker Programme intervention</td>
</tr>
<tr>
<td>Fully Integrated Practice</td>
<td>Intervention Practices that had evidence of integrating all elements of the Links Worker Programme into routine practice</td>
</tr>
<tr>
<td>Intervention Practice</td>
<td>Practices that participated in this evaluation that delivered the Links Worker Programme intervention</td>
</tr>
<tr>
<td>Partially Integrated Practice</td>
<td>Intervention Practices that had evidence of integrating only some of the elements of the Links Worker Programme into routine practice</td>
</tr>
<tr>
<td>Scottish Index of Multiple Deprivation</td>
<td>The Scottish Government's official tool to identify areas of multiple deprivation in Scotland</td>
</tr>
<tr>
<td>Social Prescribing</td>
<td>A mechanism for linking patients with non-medical sources of support within a community</td>
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Executive Summary

Background

Health inequalities in Scotland persist and people living in deprived areas often have multiple complex problems that include physical, mental health and social issues.

‘Social prescribing’ can be used by GPs to link patients with such complex needs to local community resources. The Glasgow ‘Deep End’ Links Worker Programme (the Programme), which uses social prescribing approaches, was funded by the Scottish Government and aimed to support general medical practices to link people with community resources that could help them to ‘live well’ in their communities.

The Programme was delivered in partnership by the Health and Social Care Alliance Scotland (Alliance) and General Practitioners (GPs) at the Deep End. From April 2014, the Programme was tested in 7 general medical practices serving very deprived populations in Glasgow, Scotland, with a further 8 similar practices acting as a comparison group. An evaluation of the Programme was commissioned by NHS Health Scotland, as part of its ongoing commitment to reduce health inequalities. The contract for this evaluation was awarded in August 2014 to a research team based in the University of Glasgow, Institute of Health and Wellbeing.

Aim

The overall aim was to assess the implementation and impact of the Links Worker Programme at patient, practice and community levels.

The specific aims detailed in the commissioning brief were:

Aim 1: To define the programme theory of change, the core components of the Links Worker Programme being delivered in intervention practices and key differences between intervention and control practices, and the contexts of delivery.

Aim 2: To describe and assess the implementation process and the implications for effectiveness.

Aim 3: To assess the effectiveness of the Links Worker Programme in intervention practices in achieving the intended outcomes at patient, practice and community levels compared with non-intervention practices.

Aim 4: To draw conclusions about the extent to which the programme has worked as intended, and to identify lessons about sustainability and transferability of the programme.
Methods

Study Design: Quasi-experimental outcome evaluation with embedded theory-driven process evaluation in the 15 GP practices that participated in the Programme. Eight practices were randomly assigned to the comparison group and 6 to the intervention group. The practice of the Clinical Programme Lead was also designated as an Intervention Practice, making 7 practices in the intervention group.

Intervention: Practices were provided with:
(a) a Community Links Practitioner (CLP) who were recruited from a range of backgrounds and were attached to the practice but employed by the Alliance
(b) a practice development fund (to be used at the discretion of each practice)
(c) management support from Programme staff based in the Alliance.

They developed a theory of change, which included one-to-one working with patients by all members of the practice team (but especially the CLP) to support patients’ use of community services; activities to support the practice team’s wellbeing, shared learning and use of information systems for signposting to community organisations (COs); and activities to make links with COs.

Comparison: Practices that volunteered but that were not in the intervention group received no additional resources and provided care for their patients as usual, but were free to pursue links-type activities.

Study Population: For Intervention Practices, all practice staff (such as GPs, Practice Nurses (PNs), receptionists and health care assistants) involved in the Programme and all adult patients referred to a CLP during the study recruitment period, and a sample of CO staff. For Comparison Practices, the same type of practice staff and a random sample of adult patients registered with the practices.

Process Evaluation: Qualitative, theory-based study to identify barriers and facilitators to the implementation of the Programme and possible mechanisms through which outcomes were achieved.

Outcome Evaluation: The primary measure of outcome for patients was health-related quality of life. Secondary patient outcomes included measures of wellbeing, depression, anxiety, work and social functioning, life-style behaviours (alcohol, smoking, exercise) and healthcare utilisation. Practice outcome measures included team climate, job satisfaction, morale and burnout. Outcomes were measured at the study baseline (time-point 1 for practice outcomes) and 9 months later (time-point 2 for practice outcomes).

Analysis: The process evaluation used a case-study approach with thematic analysis, informed by Normalisation Process Theory, which is useful for understanding the everyday work, and dynamics of implementing, embedding, and integrating a new way of working.

The analysis of staff outcomes first compared the intervention and comparison groups then the different types of Intervention Practice in relation to the total scores for each measure at first measurement and at follow-up and as changes over time.
The analysis of the patient outcomes was based on all patients referred to a CLP (i.e. intention-to-treat analysis). Supplementary sub-group analyses were also carried out on those who actually engaged with the CLP, and on those who also engaged with a community resource. The analyses used a statistical method known as regression which adjusts for differences between the intervention and comparison groups at baseline (such as in age, gender, deprivation and health status) to try to compare ‘like with like’. Differences between groups were tested using appropriate mixed-effects linear or generalised linear regression models, allowing for clustering by practice. Variation between practices within both groups were also examined.

Findings - The Implementation Process

Programme theories of change identified three types of activity as important to achieve patient outcomes. These were activities to support patients; activities to support staff wellbeing, shared learning and establishing the new ‘Links’ approach; and activities to increase links between practices and COs.

All Intervention Practices established bespoke processes through which GPs could refer patients to CLPs, all GPs signposted patients to COs, and all CLPs spent one-to-one time with patients. CLPs worked with people with very complex and multiple problems over time, spending considerable time with some. There were no formal systems for monitoring the CLP work in any practice.

Analysis of qualitative interviews with 12 patients showed that they appreciated the unconditional support offered by CLPs, feelings of being listened to and being valued by the CLP, and being able to come back to see the CLP whenever they needed. Some patients said that after seeing a CLP and visiting a community resource, they felt better able to find help themselves and self-manage problems. However, this experience was not universal and some patients did not find the CLP useful and did not engage with or did not find the CO useful.

Beyond the ‘core’ activities of GPs referring patients to CLPs and signposting to COs the practices differed. The differences suggested two types of Intervention Practice, ‘Fully Integrated’ (3 practices) and ‘Partially Integrated’ (4 practices). Fully Integrated Practices had a shared leadership style and better team dynamics. In the absence of strong collective leadership and with less good team dynamics, the loss of a CLP and the presence of other innovations seemed to hamper all but patient-related activities in Partially Integrated Practices. Because changes to the ways practices work takes time, some Partially Integrated Practices are likely to become Fully Integrated in time, and there was some evidence to support this in some Partially Integrated Practices.

By the end of the evaluation, it was only in Fully Integrated Practices that members of reception staff were fully engaged in signposting patients to COs. Signposting by reception staff, as well as practice-based activities such as walking groups, were much less evident in Partially Integrated Practices.
Fully Integrated Practices had embedded practice level activities to improve wellbeing and increase shared learning into routine activities. They had also established processes to use available information systems on locally available resources. For various reasons, including more difficult team dynamics, Partially Integrated Practices were less able to embed these kinds of activities into the life of their practice, and staff in them had fewer opportunities to interact formally.

Ongoing community networking in a strategic, proactive way was embedded only in Fully Integrated Practices. In Partially Integrated Practices, embedding proactive community networking proved difficult although reactive networking continued.

Across all practices, the development of close individual relationships between CLPs and staff in COs was valued because they facilitated better integration of services for patients. However, the ongoing challenge of austerity, with lack of available funding and high staff turnover in small COs, was seen a major threat to developing sustained relationships with COs.

In the absence of additional resources, only two of the eight Comparison Practices implemented any links-like activities, and these were only to suggest patients attend a CO. One of these practices was already involved in a community-orientated primary care group.

Findings - The Effectiveness of the Links Worker Programme

Staff: Data were collected by questionnaire from 138 staff members in Intervention and Comparison Practices at time-point 1 (11 months after the start of the Links Worker Programme), and from 122 at time-point 2 (nine months later). Intervention Practice staff were more likely than Comparison Practice staff to report participation in team activities aimed at improving staff wellbeing at time-point 1 (82% c.f. 25% respectively, p<0.001) and at time-point 2, (70% c.f. 31% respectively, p<0.001). There were no significant differences between Intervention Practices and Comparison Practices in job satisfaction, burn-out, morale, or most team climate items (except ‘participation’ which was higher at time-point 1 in the Comparison Practices than the Intervention Practices) at either data collection time-points.

Differences were apparent between the Partially Integrated Practices and the Fully Integrated Practices in the intervention group at both time-points. At time-point 1, job satisfaction (p=0.036), and the team climate items ‘participation’ (p=0.007) and ‘support for innovation’ (p=0.004) were higher in the Fully Integrated than the Partially Integrated. At time-point 2, team climate items ‘participation’ (p=0.001), ‘support for innovation’ (p=0.039) and ‘team objectives’ (p=0.032) were higher in the Fully Integrated Practices than the Partially Integrated. Participation in team activities aimed at improving staff wellbeing was higher in the Fully Integrated Practices than in the Partially Integrated Practices (88% c.f. 54% respectively, p=0.004) at time-point 2. Staff in the Fully Integrated reported less likelihood of giving up direct patient care in the next five years than staff in the Partially Integrated Practices at time-point 2 (p=0.049).
Staff knowledge of local community resources (‘very good/good’) tended to be lower in the Partially Integrated Practices than in the Fully Integrated Practices (time-point 1; 29% c.f. 61%, p=0.036 and time-point 2; 49% c.f. 75%, p=0.062, respectively). The reported number of community resources suggested to patients (‘signposting’) was lower in the Partially Integrated Practices than in the Fully Integrated Practices at time-point 2 (p=0.014).

Patients: The 980 adult patients referred to the CLP during the study recruitment period (March 2015 to December 2015; 11 months after the start of the Programme) were generally more deprived than the practice populations as a whole. They were mainly below 60 years of age (mean 46 years) and there more women (59%) than men (41%). Patients referred to CLPs had complex problems, with a third of the patient problems spanning two or more of the three domains (physical, mental health and social).

Deprivation scores, gender and types of problems were similar in Fully Integrated Practices and Partially Integrated Practices, but patients tended to be younger in the Fully Integrated Practices and complexity of problems was higher in the Fully Integrated than the Partially Integrated Practices. On average, during the study period, CLPs made contact with 81% of the adult patients referred to them, with Fully Integrated Practices achieving significantly more contact than Partially Integrated Practice (89% c.f. 74%, p<0.001).

Patient recruitment: Of the 980 adult patients referred to a CLP during the study period, 559 (57%) were referred to the study team for potential recruitment to the study. Of these 559 patients, 288 (52%) were recruited and completed a baseline study questionnaire. Nine months later, 214 of these 288 patients (72.4%) completed the follow-up questionnaire. The patients recruited into the study were largely representative of all patients referred to a CLP except they were slightly older. Baseline variables did not differ between patients from Fully Integrated Practices and Partially Integrated Practices.

In Comparison Practices, a random sample of 7,942 patients were sent a baseline questionnaire without personal contact by the research team, and 612 (8%) returned a completed questionnaire. Nine months later, 561 of these 612 patients (92%) completed the follow-up questionnaire. As expected given the different ways by which they were recruited, there were considerable differences between the study patients from the Intervention Practices and study patients from the Comparison Practices. Intervention patients had more complex health and social problems than the comparison patients. These differences were adjusted for by regression modelling when analysing effectiveness.

Patient outcomes: There were no statistically significant effects of referral to a CLP on the primary or secondary patient outcomes at 9 months compared with usual care in patients in the Comparison Practices, after adjusting for baseline differences using the best regression model. There were also no beneficial effects on self-reported healthcare utilisation.

There were no statistically significant differences in patient outcomes between the Fully Integrated Practices and Partially Integrated Practices for the primary outcome
and the majority of the secondary outcomes. The same is true of healthcare utilisation measures, except visits to the PN, which were significantly higher in the Fully Integrated Practices, compared with the Partially Integrated Practices. However, it should be noted that the study was not powered to examine sub-group analyses.

There were no differences in the primary outcome of health-related quality of life of patients who engaged with a CLP (rather than just being referred) compared with the comparison group (in the best regression model), and this was not affected by number of times seen by CLP nor whether the patient attended a community resource.

However, there were some differences in the secondary outcomes of anxiety symptoms, depressive symptoms, and self-reported exercise levels. These were significantly better in those who saw a CLP twice or more compared with the comparison group. In those who attended a suggested community resource, anxiety and exercise levels also improved significantly. Effect sizes for anxiety and depression were small to moderate but of possible clinical relevance.

In terms of healthcare utilisation, the number of prescribed medications was higher in patients who were referred to but did not see a CLP.

Again, it should be noted that the study was not powered to examine such sub-group analyses.

Synthesis of Findings

The activities articulated in the theory of change were largely implemented as planned but there were difficulties in embedding practice-level and proactive community networking activities into Partially Integrated Practices. However, no practices embedded CLP records with other patient records and none had ongoing formal systems for monitoring outcomes. These findings combined suggest that continued engagement with a practice-level theory of change is important, and that practices involved in any future roll-out should be clear about why they undertake any set of activities, why they are important to embed into the life of the practice, what outcomes they can expect, and how they should measure them. On-going monitoring of both processes and outcomes are important and will be likely to help practices more readily respond when activities may not go quite as planned.

No quantitative data on the potential financial sustainability of the programme were available. Analysis of the qualitative data showed that staff working in Intervention Practices identified the CLP’s presence and financial resources for practice development, time, leadership, and CLP support as essential for the continuation of the Programme. Without these, staff in only two Comparison Practices were able to undertake limited links-like activities, namely signposting to COs.

Both practice and CO staff expressed concern about the sustainability of the overall model of delivery. Wider implementation of the Programme would do well to assess the long-term sustainability of the Programme including the sustainability of
community-based organisations. Wider implementation of the Links Programme in deprived areas would fail if COs do not have capacity to meet demand.

The practitioners who referred patients to the CLPs (mainly GPs) were clearly identifying ‘links-suitable’ patients who had complex problems and were very deprived (even more so than the practice population). GPs and other primary health care professionals with good knowledge of patient needs, should continue to be the main referral route through which CLPs receive patients in any subsequent implementation of the Programme.

Fully Integrated Practices were characterised by shared leadership, good team relationships and functioning, continuity of CLP support and absence of other ongoing, competing innovations. It is noteworthy that significantly fewer staff in the Fully Integrated Practices were considering leaving direct patient care in the next five years. It is not known how many of the Partially Integrated Practices would have become Fully Integrated over a longer timeframe, but it is known that embedding new ways of working can take up to five years. On-going support might help practices to ‘keep at’ practice development and proactive community development activities.

The finding that those who engaged with the CLP showed better outcomes than the comparison group for mental health outcomes and exercise (in the best adjusted model) does suggest that the Deep End Links Worker Programme may have some limited effects on mitigating the effects of deprivation on health. It is also possible that the addition of a CLP to the practices also mitigated to some extent the inverse care law. However, a reduction in self-reported GP or PN consultations was not observed in any analysis, and indeed PN consultation increased in the Fully Integrated Practices.

**Recommendations**

It is suggested that:

- Any subsequent implementation of the programme in similarly deprived practices should be certain to allow CLPs to work within general practices in flexible ways.
- A practice development fund is likely to be essential to allow initial changes in the way a practice works to embed the Programme in the first two years.
- On-going support to develop collective leadership style in ‘Partially Integrated’ type practices might help them move more quickly to fully integrating all aspects of the Programme.
- Systems should be developed for on-going monitoring of both processes and outcomes which will be likely to help practices more readily respond when practice development and community networking activities may not go quite as planned.
- GPs and other clinicians with good knowledge of patient needs should continue to be the main referral route through which CLPs receive patients in any subsequent implementation of the Programme.
- Any wider implementation of the Programme should assess the long-term sustainability of community-based organisations.
• An evaluation of longer-term outcomes of the current Glasgow pilot practices, over 2-3 years, with linked health and social care utilisation drawn from the most robust sources, will be required to assess whether or not the Programme is cost-effective according to the usual criteria used by the National Institute for Health and Care Excellence, which is an incremental cost effectiveness ratio of less than £20,000 per quality adjusted life year gained (quality adjusted life years can be calculated from changes the quality of life measure used in this study).

• Given the very limited evidence-base worldwide for effectiveness of this type of intervention, consideration should be given to conducting a randomised controlled trial in which patients deemed suitable for CLP support are randomised at patient level, thus overcoming the problems of unmatched intervention and control groups observed in the current evaluation.
1. Introduction

This report presents the evaluation of the Scottish Government funded Glasgow ‘Deep End’ Links Worker Programme (the Programme), which delivered in partnership by the Health and Social Care Alliance (Alliance) and General Practitioners (GPs) at the Deep End. When it was initiated, the Programme was also supported by the Scottish Association for Mental Health (SAMH) and the Royal College of General Practitioners Scotland (RCGP), which served in an advisory capacity.

In 2014 when the evaluation was commissioned, the Programme aimed to support people to live well through strengthening connections between community resources and primary care. It operated in general practices serving some of the most deprived communities in Scotland and in the context of wide health inequalities that exist between the most and least deprived areas.

1.1 Background and Policy Context

Tackling health inequalities has been a significant and complex problem in Scotland for over 50 years and has been a Government priority since 2007. Health inequalities arise from a fundamental inequity in the distribution of income, power and wealth. This has an impact on opportunities including, for example, good quality work, education and housing. It is these determinants that shape individual experiences and health throughout life. In 2012, the Auditor General in Scotland reported that:

- average life expectancy of men in the most deprived areas is 70.1 years, in the least deprived areas it is 81 years
- for women it is 76.8 years in the most deprived areas, in the least deprived areas it is 84.2 years
- GP consultations for anxiety per 1,000 patients is 62 in the most deprived areas, in the least deprived areas it is 28 and
- alcohol-related hospital admissions per 100,000 population in the most deprived areas is 1,621, in the least deprived areas it is 214.

Other Scottish research, conducted by the research team, has demonstrated that the onset of multimorbidity (the presence of two or more long term conditions) occurred 10–15 years earlier in people living in the most deprived areas compared with the most affluent, with socioeconomic deprivation particularly associated with multimorbidity that included mental health as well as physical health problems.

General Practitioners (GPs) at the Deep End (The Deep End) is a collaboration of general practices serving the 100 most deprived populations in Scotland, based on the proportion of patients on the practice list with postcodes in the most deprived 15% of Scottish datazones. They work together to highlight the experiences of delivering primary care in areas of concentrated deprivation and to advocate for the

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(1) This ranking, based on the Scottish Index of Multiple Deprivation, is published on the website of the Information Services Division of NHS Scotland. After excluding special services in the list, such as nursing homes and services for people who are homeless or who have challenging behaviour, Deep End practices have from 88-44% of their patients in the most deprived 15% of datazones.
particular needs of these practices and their patients. Eighty-six of these 100 practices are in NHS Greater Glasgow and Clyde.

Deep End GPs produced a number of papers aimed at addressing health inequalities. One of these, published in 2013, ‘What can NHS Scotland do to prevent and reduce health inequalities?’ highlighted the lack of resources available to staff in general practices serving those patients with most need and proposed the appointment of practice attached community links workers. The proposal for links workers drew on two overlapping but distinct frameworks – social prescribing and assets-based community development, both of which were linked to a wider theory of community oriented primary health care. The Deep End report argued that the presence of links workers would help address health inequalities because they would help address the inverse care law, through which the availability of good medical care tends to vary inversely with the need for it in the population served. The implicit assumption is that the additional capacity their presence would bring could help address some of the meso-level social determinants of health, such as poor access to services and low use of community-based non-clinical support.

Social prescribing initiatives have blossomed in the UK in recent years. There are different definitions but all suggest it is a ‘mechanism for linking patients with non-medical sources of support within a community’. To link patients with non-medical sources of support, general practices are expected to work with local COs and other providers to recommend (‘prescribe’) their services to patients with complex health and social care problems. For Deep End GPs, social prescribing was seen as an attempt to avoid the over-medicalisation of what are fundamentally societal problems.

Despite the large number of social prescribing schemes there is surprisingly little hard evidence of their clinical or cost-effectiveness. A recent review, published by Bickerdike et al, included 15 evaluations of social prescribing programmes. The review found most evaluations were small scale, lacked comparative controls, had short follow up durations and did not use standardised and validated measuring tools. Only one (discussed below) was a randomised controlled trial (RCT). The authors noted that despite clear methodological shortcomings, most evaluations presented positive conclusions, which they suggested were not warranted.

A previous scoping review, published in 2015 by Mossabir et al, found 7 relevant publications, of which only 2 were RCTs. The first (Clark 1992) was a RCT of an intervention to improve social contacts in older women (75 years and over) in England. A community worker offered help to access a range of support including social, financial, housing, personal care or medical services. Only around half of those offered the support wanted it but overall, the intervention found no evidence of benefit measured 3 years after randomisation, in a large sample (n= 261 intervention group, n = 262 control group). The second (Grant 2000) (also described by Bickerdike et al) was a RCT of a link worker approach for primary care patients (aged 16 years and over) with psychosocial problems, conducted in England. In a sample of 151 patients (n = 90 in the intervention group and n = 71 in the control group) it found significant benefits 4 months after randomisation in terms of anxiety and some aspects of quality of life, but no effects on depression, social isolation, GP consultation rate or GP prescribing.
The 2015 scoping review also investigated what helped and hindered implementation of linking schemes. The authors found that having health professionals involved in referral; being able to tailor support offered to people’s own particular need; being able to be flexible in how patients were seen (for example at home or elsewhere); and the facilitator being able to develop relationships with both health professionals and staff in COs were important facilitators for implementation of social prescribing interventions.

These findings on implementation were supported in a more recent review of patient navigation programmes (in which patients are supported, usually by one ‘health navigator’ to ‘navigate’ complex health systems and other support)\textsuperscript{16}. This review included 34 studies, none of which were RCTs, did not comment on effectiveness but did identify 11 factors likely to facilitate or hinder implementation including navigator role clarity, clear operational procedures, strong intra and inter-organisational procedures and effective communication between providers including clinical staff.

The social prescribing model has also been explored in Scotland in particular through the Scottish Government funded Links Project\textsuperscript{17} and in the BRIDGE (Building Relationships in Deprived General Practice Environments) project which was funded by the Scottish Collaboration for Public Health Research and Policy.\textsuperscript{18} Although these projects found that the links approach is feasible to deliver in Scotland, the current evidence base, in Scotland or further afield, gives little information about the impacts of these approaches on patient or practice outcomes or on health inequalities.

### 1.2 Aims and Objectives

In order to provide further evidence to inform future local and national programmes and policy decisions about the continuation and extension of the Links Worker Programme to practices serving multiply deprived communities NHS Health Scotland commissioned an evaluation.

The detailed aims and objectives are presented in full below.

**Aim 1:** To define the programme theory of change, the core components of the Links Worker Programme being delivered in intervention practices and key differences between intervention and control practices, and the contexts of delivery.

**Objectives for aim 1:**

a) To work with the Alliance, intervention practices (and control practices), other stakeholders and the Evaluation Working Group to develop and outline the core programme theory. This should include specifying the intended short, medium and longer-term outcomes. This theory of change will underpin the impact evaluation and will need to take into account the timescale of the programme.

b) To map out the core components of the intervention being delivered in each of the intervention practices identifying the key differences between intervention and control practices.
c) To describe the contexts in which both intervention and control practices operate and how this influences their approach to community oriented primary care, including the links worker programme.

Aim 2: To describe and assess the implementation process and the implications for effectiveness.

Objectives for aim 2:
To analyse the implementation and delivery of community-oriented approaches, and the implications for effective delivery, including:

a) To map out in both intervention and control practices what is delivered to whom, by whom and in what ways.

b) To describe key variations in the adoption and delivery of the Links Worker programme across the intervention practices and their community partners, including how resources were used, and the extent to which similar approaches are adopted in control practices.

c) To describe processes for establishing and maintaining the links and connections of and between patients, practice team members and community groups and the influences on these processes.

d) To describe whether and how community oriented approaches, including the Links Worker Programme, are sustained and what influences this.

e) To report on the experiences and reactions of patients, practice team members (including link workers) and community agencies to the Links Worker Programme in intervention practices and delivery of community based approaches in control practices, including perspectives on the strengths and weaknesses of the approaches, the perceived outcomes and the characteristics of those most/least likely to benefit.

Aim 3: To assess the effectiveness of the Links Worker Programme in intervention practices in achieving the intended outcomes at patient, practice and community levels compared with non-intervention practices.

Objectives for aim 3

a) To collect baseline and follow-up data to analyse the social and health effects of the Links Worker programme at patient, practice and community levels, compared with control practices, including intended and unintended effects, positive and negative, direct and indirect/secondary effects.

b) To assess the reach and coverage of the patient population in intervention practices intended to benefit, the characteristics of those who participate and the differential effects (which patient groups benefit most/least).

Aim 4: To draw conclusions about the extent to which the programme has worked as intended, and to identify lessons about sustainability and transferability of the programme.

Objectives for aim 4:

a) To draw conclusions about the effectiveness of the Links Worker Programme and the factors that contributed to this. Identifying those aspects of the programme that are essential for effective delivery (the ‘active ingredients’), those factors that are desirable for effective delivery and those factors which act as barriers and need to be addressed to improve effective delivery).
b) To identify the learning for transferability of the programme to other practices and other contexts if the programme is found to be effective.

c) To draw conclusions about the sustainability of the programme beyond the study.

d) To draw conclusions about the extent to which this intervention has the potential to contribute to a reduction in health inequalities.

The research team was asked to deliver an evaluation, based on a quasi-experimental design, to assess the effectiveness of the Links Worker Programme, including the extent to which the ethos and overarching objectives of the Programme were shared and experienced by practices and patients, and with what outcomes at patient, practice and community levels. They were also asked to obtain an understanding of how the programme is implemented, how it operates and how it is experienced by practice teams, patients, and community based agencies as well as to assess overall effectiveness.

In 2014, the research team, based at the Institute of Health and Wellbeing, University of Glasgow, were commissioned to undertake the evaluation.

1.3 Structure of the Report

The research was conducted in two phases.

The first phase elaborated on the Programme’s existing theory of change (to address aim 1). The theory of change made explicit the resources available, actions to be taken and expected short, medium and long term outcomes of the Links Worker Programme. A report of this phase was published in May 2016 but the agreed theory is summarised again in a description of the Programme provided in the next, methods, chapter when the Programme is explained.

This report of the second phase of the research addresses the remainder of the evaluation’s aims (aims 2-4). Chapter 2 provides an overview of the research design and the methods for both process and outcome evaluations. Chapters 3 and 4 present the results of process and outcome evaluation respectively. Finally, chapter 5 presents the results from a synthesis of findings from process and outcomes evaluations and makes recommendations for policy and practice.
2. Methods

2.1 Study Design

The study was a quasi-experimental general-practice-level cluster randomised controlled trial with a parallel mixed-methods process evaluation.

2.2 Study Setting and Participants

The study was set in 15 Glasgow general medical practices serving patients living in some of the most deprived areas in Scotland that submitted an application and practice development plan in response to an invitation to participate in the trial of the Links Worker Programme. The 15 general practices included the practice of the Programme Clinical Lead.

The Programme Clinical Lead’s practice was selected to receive the intervention. The Health and Social Care Alliance Scotland, which was charged with implementing and delivering the Programme, then randomised the remaining 14 practices to the Intervention or Comparison groups.

The evaluation was based on data derived from 7 Intervention Practices (i.e. the practice of the Programme Clinical Lead and six practices that were randomised to receive the Programme) and 8 Comparison Practices (i.e. those not randomised to receive the Programme). All practices agreed to participate in this independent evaluation and Comparison Practices were offered £5,000 to cover the time they spent on evaluation activities.

2.3 Inclusion and Exclusion Criteria

2.3.1 Practice staff

All staff in the Intervention Practices involved in delivery of the intervention and all staff in the Comparison Practices that would have been involved in the intervention had their practice been randomised to receive it, based on information given to us by the Practice Managers (PMs). No exclusion criteria were applied to either staff group.

2.3.2 Patients

Adult patients (aged 18 years or over) who were registered with an Intervention Practice and who were referred (or self-referred) to a CLP during the study recruitment period, and a random sample of adult patients registered with a Comparison Practice. Patients were excluded from the study by their usual healthcare provider if, in the provider’s opinion, participation was contraindicated for health or social reasons (such as terminal illness or a family/other social crisis). Reasons for exclusions were collected by the research team but identifiable information about patients were not. Instead, providers were asked to pass on the
patients’ age, gender and postcode (the latter to calculate deprivation from the Scottish Index of Multiple Deprivation (SIMD)).

2.3.3 Staff working in community organisations

A convenience sample of staff from local COs were recruited to focus group discussions and to a panel of key stakeholders for each practice. The organisations were selected, with the help of the CLPs and practice staff, based on having had some engagement with practices and/or their patients. Because a convenience sample was used, there were no exclusions.

2.4 The Links Worker Programme

The Links Worker Programme built on the proposal from GPs at the Deep End. The original conceptual and theoretical basis for the programme as well as the operational and practical details were developed by the Clinical Lead for the Programme with colleagues from General Practitioners at the Deep End, the Links Worker Programme team and The Alliance for Health and Social Care (Alliance). The Clinical Lead saw the programme as being made up of two inter-related interventions: the provision of a practice attached CLP and the development by each participating practice team of a practice-wide links approach. The practice-wide development, supported by a practice-development fund, differentiated the Deep End Link Worker Programme from most other social prescribing programmes. The rationale for the fund and associated practice development was based on the lived experience of Deep End GPs who know how hard it is to introduce any change when staff are working flat out to meet demand in difficult circumstances. In addition, the Bridge Project found that changes though widely supported were very slow to be implemented because staff had to focus on other priorities. The original rationale for the Programme was that if individuals feel supported in their lives, they will be more likely to respond to information on ways to improve their health and to live well.

The ethos of the Deep End, which seeks to bring together and make use of the accumulated wisdom, knowledge and theorising that arises from immersion in the social context in which deprivation and poor health are produced, informed the original development of this Links Worker Programme. This meant that the Programme allowed the Intervention Practices to develop their own approaches, shaped around a functional core.

The functional core of the Programme was articulated as seven ‘Primary Care Team Capacities’: improvement in team wellbeing; shared learning; increased awareness of opportunities and of patients’ needs; improved ‘intelligence’ or understanding of local opportunities; signposting of patients to local resources; problem solving by the practice team; and network building by the practice team. The decisions on what actions to take to achieve these seven primary care team capacities were, from the beginning, allowed to vary through local practice decision making.

In the first part of the evaluation, already reported, the research team used data from existing documents and focus group discussions with Intervention Practice and Programme staff to expand on the theories through which the Programme was expected to operate. Discussions were also held with staff in Comparison Practices.
to understand if they were implementing any activities to link patients with COs. The methods are described more fully in section 2.6.

Figure 1, taken from the interim report, provides a summary of the expanded theory of change. It shows that in late 2014 and early 2015 practice staff had clear plans for activities at patient, practice and community level some of which were already being enacted. The main activities planned and undertaken by practices were:

- **patient level**: one-to-one working with patients by all members of the practice team to signpost, to recommend, to refer and to support individual patients to make use of community services.
- **practice level**: activities to support the team’s own wellbeing; activities to develop shared learning and awareness about community resources; gathering ‘intelligence’ about what is available to ‘signpost’ patients to resources and solving problems through the redeployment of staff.
- **community level**: activities to cultivate relationships with local COs by primary care teams as well as CLPs; development of referral pathways and multi-agency resolution of problems; and events to enable shared learning to consolidate new and existing community linkages.

Figure 1 also details how these activities were expected to operate on outcomes:

- **patient level**: one-to-one signposting and individual support were expected to result in patients being more able to acquire and use available skills, information and support which was expected to lead, in turn, to patients better self-management of health conditions, better ability to navigate systems, avert crises and adapt to challenges, which was also expected to lead to improved relationships with professionals and a sense of being valued as a ‘whole person’. All of these together were expected to lead to improved wellbeing.
- **practice level**: activities to support the team’s own wellbeing and for shared learning and awareness of community resources were expected to lead to improvement in team members’ personal wellbeing, to their ability to provide appropriate, timely information to patients, to better skills in identifying and supporting patients who need help, and to having sufficient time to listen and advise and support people who face multiple problems.
- **community level**: the cultivation of relationships between practices and COs was expected to lead to established cross-sectoral referral pathways, joint resolution of shared problems, improved practice knowledge and intelligence about local COs and services provided, and improved capacity of local COs to support people. This, in turn, was expected to result in better use of resources to support people to live well, a more community-oriented practice identity and eventually, the establishment of the practice as community hub.

Figure 1 lists the new resources made available to deliver the Programme:

- a practice development fund
- a practice-attached CLP who is employed by The Alliance
- management support from Programme staff based in The Alliance
- resource to enable 1 GP and 1 PM to attend a shared-learning event organised by Programme staff, three times per year.

Like many other interventions to change systems in primary care, the financial resources provided by the practice development fund were used by practices to
provide existing staff the time to do different things and increased staffing so that clinical and non-clinical practice staff could be freed up from the everyday work to initiate and embed new ways of working. The CLPs were employed by the Alliance, which provided management support for all CLPs and staff in practices, and convene the shared learning events three times a year.

The work at each level to achieve outcomes is reported in detail in chapter 3.

Comparison Practices did not receive additional resource or the services of a CLP. They were free to undertake any links-like activities they wanted. Their activities were monitored, as presented in section 3.2.6.
<table>
<thead>
<tr>
<th>Level of Intervention</th>
<th>Resources</th>
<th>Activities</th>
<th>Short term outcomes</th>
<th>Medium term outcomes</th>
<th>Long term outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient</strong></td>
<td>Practice Development Fund (much of it spent on more Time and Staff)</td>
<td>1) Non-clinicians, 2) clinicians and 3) community links practitioners and working one-to-one with patients 4) Patient participation in practice organised/related activities</td>
<td>More able to acquire, access, and use available skills, information and support when needed; navigate health and other systems</td>
<td>Self-management of health conditions, and navigating and averting crisis and adapting to challenges</td>
<td>More people supported to live well</td>
</tr>
<tr>
<td></td>
<td>Community Links Practitioner Programme clinical and management support</td>
<td>1) Improving primary care team wellbeing; 2) shared learning and awareness; 3) intelligence; 4) signposting; and 5) problem solving</td>
<td>Improved team wellbeing</td>
<td>Adequate protected time and resources for shared learning; provision of appropriate, timely information; and improved understanding of social/personal context of illness</td>
<td>Improved skills in identifying and supporting those experiencing barriers to accessing resources, and enabling more effective patient self-management</td>
</tr>
<tr>
<td><strong>Practice</strong></td>
<td>Community Links Practitioner Programme clinical and management support</td>
<td>Cultivating relationships with local community organisations by 1) primary care teams and 2) CLPs; 3) meetings and discussions to develop referral pathways and multi-agency resolution of problems; and 4) training and shared learning to consolidate new and existing community linkages 5) Patient and community involvement with practice activities, and 6) community capacity development for local organisations</td>
<td>Stronger practice-community relationship</td>
<td>Established cross-sectoral referral pathways</td>
<td>Impact on primary care team, NHS services, local authority services, and community resources to support people to live well</td>
</tr>
<tr>
<td><strong>Community</strong></td>
<td>Community Links Practitioner Programme clinical and management support</td>
<td>1) Improving primary care team wellbeing; 2) shared learning and awareness; 3) intelligence; 4) signposting; and 5) problem solving</td>
<td>Improved team wellbeing</td>
<td>Adequate protected time and resources for shared learning; provision of appropriate, timely information; and improved understanding of social/personal context of illness</td>
<td>Improved skills in identifying and supporting those experiencing barriers to accessing resources, and enabling more effective patient self-management</td>
</tr>
</tbody>
</table>

**Figure 1.** Theories of Change at for Activities at Patient, Practice, and Community Levels of Intervention Synthesised Across Practices
Intervention and Comparison Practices operated in comparable environments in terms of age and deprivation levels. Availability of community support organisations, as recorded by Glasgow Council for the Voluntary Sector, was also similar in terms of mean number of services provided by the third sector available in a local area.

2.5 Study Approval

As the study was an evaluation of an existing service development, it fell outwith the remit of NHS research governance arrangements. Instead, the study was approved by the University of Glasgow College of Medical Veterinary and Life Sciences Ethics Committee (200140077). As participation in the evaluation has no associated risk to participants, no specific measures are applicable to determine patient safety.

2.6 Process Evaluation

2.6.1 Data collected from each practice

The process evaluation used a mixed method, comparative case study design in which Intervention and Comparison Practices were the cases. Data collected in each practice and when they were collected are summarised in Figure 2.

**Figure 2. Data Collected in Intervention and Comparison Practices**

<table>
<thead>
<tr>
<th>Type of Practice</th>
<th>Focus Group Discussion</th>
<th>Email Survey (at start and towards end of process evaluation)</th>
<th>In-depth interview</th>
<th>End-of-Evaluation interview</th>
<th>Interview with patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Practices</td>
<td>✔ ✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Comparison Practices</td>
<td>✔ ✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Phase 1 of the evaluation, between November 2014 and January 2015, one focus group discussion was conducted in each of the seven Intervention Practices and one joint interview with staff in each of the eight Comparison Practices. The discussions and interviews were primarily designed to develop further the Intervention Practice-level theories of change for the Programme and to find out whether any Comparison Practices were carrying out any similar activities. Main findings from them are reported in the interim report. However, they did include useful information about how staff understood the Programme and data from them are included in this report.

In the 7 Intervention Practices, the discussion group members included the lead GP, CLP and PM. In some group discussions, other members of staff (other GPs and PNs) were also invited by the PM or GP if they were felt to have been particularly involved. Wherever possible a CO worker, identified by the CLP as already having
experience of working with the practice, was also invited. In the 8 Comparison Practices, joint interviews were held with the lead GP and PM.

Staff members were sent information about the discussion or interview in advance and informed consent was received before the discussion or interview began. The discussions or interviews lasted between 1 and 1.5 hours. The focus group discussion topic guide for Intervention Practices (Appendix 1) covered participants’ views of the Programme, its aims, how the Programme could achieve its goals, and what the underlying mechanisms of action might be. A similar interview topic guide for Comparison Practices (Appendix 2) focused on what participants (GPs and PMs) thought the Programme was and the background to it. In all cases, discussions and interviews were tape-recorded and transcribed verbatim.

In Phase 2 of the process evaluation, additional methods of data collection were used to understand how implementation of the Programme was unfolding and the experience of staff and patients:

- a brief, open-ended, questionnaire sent directly by email to a panel of staff in each Intervention and Comparison Practice in June – October 2015 and again one year later. Up to 2 reminders were sent.
- in-depth interviews with lead GPs and CLPs in each Intervention Practice.
- end of evaluation interviews with lead GPs, CLPs and PMs in Intervention Practices and with a lead GP and PM in Comparison Practices.
- interviews with a sample of patients who had been referred to the CLP.

The brief questionnaire included mainly open-ended questions designed to elicit progress, and views on activities, from the panel of staff from each Intervention and Comparison Practice.

In Intervention Practices, the aim was to recruit the panel to include lead GP, PM, CLP, a reception/support staff member, practice/district nurse and staff from 2 different COs to elicit views from staff expected to have a range of different experiences. In Comparison Practices, the aim was to include only the Lead GP and PM to minimise burden of data collection.

In Intervention Practices, to facilitate access to all staff, emails were first sent to the PM in each practice. The purpose for forming the panel in each practice was explained and PMs were asked to suggest practice and CO staff members to take part. In Comparison Practices, the emails were sent to both PMs and GPs.

For lead GPs and PMs in Comparison Practices and for lead GPs, PMs and CLPs in Intervention Practices, consent to participate in the evaluation was already obtained. All others were sent information about the study and asked for informed consent prior to completing the email questionnaire. Since the purpose of the email questionnaires was to track progress in the implementation of the Programme, it was not seen as a problem that most panel members had already participated in focus group discussions and interviews in Phase 1.

The Intervention Practice questionnaire was initially piloted with the clinical lead GP and the PM of the clinical lead’s practice who provided feedback that the first version
of the questionnaire was too long. Modifications were then made to shorten the questionnaire.

The Intervention Practice staff questionnaire (Appendix 3) reminded respondents of the seven primary care team capacities targeted by the Programme and asked them to write:

- about two activities undertaken as part of the Programme that provided most and least satisfaction.
- if there had been any changes in the wider context of the Programme.
- if their participation in and expectations of the Programme had changed over time.

The CO staff questionnaire (Appendix 4) focused on whether and how working relationships with practices have improved.

The Comparison Practice staff questionnaire (Appendix 5) focused on any developments in content or scale of Links-type activities, change in local context and what might be helping or hindering activities.

The follow-up questionnaire was sent one year later to everyone who completed the first questionnaire. It covered the same general topics but was tailored for each participant by reminding them of the answers they had given in the previous survey. The tailoring was done to maximise learning about implementation of original plans; it was also hoped it would encourage a good response rate.

As implementation proceeded and the outcome evaluation got underway, it became apparent that CLPs were seeing fewer new patients each week than anticipated (prior to the start of the evaluation, the research team estimated, based on similar links workers projects elsewhere in Scotland, that the CLPs would see 5 new patients each week, but subsequent experience suggested that this number was closer to 2). This raised questions about the day-to-day work of the CLPs. Consequently, in consultation with NHS Health Scotland and with the support of the Programme team, in-depth interviews were conducted with all CLPs (Appendix 6) and all lead GPs (Appendix 7) in Intervention Practices. Programme Management staff were also interviewed to understand further the background of work being undertaken in the practices (Appendix 8).

The interviews focused on the day-to-day work of CLPs and their routines. They were guided by Normalisation Process Theory (NPT)\textsuperscript{20-23}, which is a useful theory for understanding the everyday work, and dynamics of implementing, embedding, and integrating a new way of working. Interviews covered:

- the work of a typical day in the life of a CLP
- the work involved in developing primary care team capacities
- networking activities
- working one-to-one with patients
- the referral process to CLPs by the practice team
- any other activities undertaken by the CLP
- the extent to which the CLP role was embedded within the work of the practice.
Contact to arrange the interviews was made by email or telephone and the interviews were conducted in offices or public venues, such as the local library, as agreed with participants. Informed consent was obtained before the interview started. The interviews lasted between 45 and 80 minutes, were tape-recorded and transcribed verbatim.

End of evaluation interviews were conducted with the lead GP, CLP and PM in each Intervention Practice. The topic guide (Appendix 9) covered:

- perceptions of Programme achievements
- how staff thought the Programme had affected their and their colleagues’ working life
- what the Programme had achieved for patients, the practice and local COs
- what staff thought the Programme needed to become sustainable.

Contact to arrange these interviews was also made by email or telephone and the interviews were conducted in offices or public venues, such as the local library, as agreed with participants. Informed consent was obtained before the interview started. The interviews also lasted between 45 and 80 minutes, were tape-recorded and transcribed verbatim.

Interviews with a sample of patients who had been referred to a CLP and who had consented to participate in the study were conducted between April and November 2016. A purposive sampling strategy was developed which attempted to obtain a range of views from around 15 men and women of different ages with at least two different reasons for Links Worker referral (including mental or physical health or social problems).

Patients were telephoned by the interviewer and if they agreed to take part, a time and place for interview was arranged that suited the respondent. Informed consent to take part in the interview was obtained before the interview started. At the end of each interview, participants were given a £20 voucher as a token of appreciation of their time. The voucher was not mentioned at the start of the interview or during recruitment in order not to overly influence decisions on participation for monetary gain.

The topic guide (see Appendix 10) was guided by Self-Determination Theory (SDT). SDT is a theory of psychological wellbeing which also addresses issues of motivation. The originators of the theory, Deci and Ryan, suggest that everyone has ‘three basic needs’ for:

- autonomy (the ability to feel like a causal agent and sense of free will when doing something)
- competence (feeling that one’s actions will result in expected outcomes and skills to make that happen)
- relatedness (feelings that one is connected to, and able to interact with, others).

It is thought that when patients have their psychological needs for autonomy, competence, and relatedness supported in the process of their health care, they may
engage more consciously in treatment and outcomes may be maintained better over time. The interview guide included question designed to elicit whether patients had felt more autonomous, competent and connected as well as questions about how contact with the CLP had been and what happened in relation to the CO. The in-depth interviews were conducted in the patients’ homes, public venues or in health centres. They lasted between 25 and 60 minutes and were tape-recorded then transcribed verbatim.

2.6.2 Analysis

The comparative case study design allowed qualitative data from focus group discussions, in-depth and end of evaluation interviews for each practice to be summarised by practice. This enabled a detailed picture of the process of implementation of the Programme to be built in each Intervention Practice or of similar developments in Comparison Practices.

Data from each source were analysed thematically in the first instance. Thereafter, emergent codes were mapped to NPT, in order to identify what helps and hinders the adoption and implementation of the Links Worker Programme in each practice. Areas explored were:
- how staff understand the Programme
- how staff engage with the Programme and involve others
- what staff do in the Programme
- how this is monitored and followed-up.

In addition to coding to NPT, other emergent themes included:
- what CLPs do at patient, practice and community levels of activity
- a description of the process of referral of patients to CLPs
- perceptions of sustainability.

The usefulness of Candidacy theory 26,27 and the Social Determinants of Health theory 28 was explored by coding the data to a coding framework that included constructs within these. Neither of these theories proved as helpful as NPT to address the specific objectives of the evaluation, and so they were not included in the subsequent development of practice case study reports. NPT was particularly useful because it is a theory about embedding new interventions in routine, everyday practice.

In Comparison Practices, thematic coding was more straightforward because there were fewer data collected. Themes included:
- how staff understood the Links Worker Programme
- what activities were undertaken that might result in linking between patients and COs
- whether any practice development activities were undertaken
- whether practices had been able to establish links with COs.

Following thematic coding, detailed case studies were constructed for each Intervention and Comparison Practice. These focused on how staff made sense of
the Links Programme, how they engaged with the Programme and involved others, how they carried out the Programme in relation to resources used, patient, practice and community-level activities, how staff knew whether what they were doing was effective and their views on sustainability.

The final stage of analysis was a cross-case comparison to compare systematically the implementation of the Links Worker Programme in Intervention Practices and to consider factors that facilitated and hindered implementation. This allowed the identification of two types of Intervention Practices, which are described in section 3.2. When the two types of practice were identified, each practice case study was re-interrogated to check on similarities and differences between them. In Comparison Practices, the construction of case studies allowed the identification of whether or not any links-like activities were being undertaken.

For the purposes of this report, analysis of patient interviews focused on the experience of the Programme and any resulting benefits in relation to its theory of change.

2.7 Outcome Evaluation

2.7.1 Recruitment of participants and withdrawal from study

Participant recruitment for the outcome evaluation took place between March and December 2015.

Data for the quantitative outcome evaluation were collected by:

- self-completed questionnaires from staff in both Intervention Practices and Comparison Practices at the start of the evaluation (March 2015) and follow up 9 months later (Appendices 11 and 12). It is important to note that the evaluation started 11 months after the Programme was initiated (April 2014). Hence, staff data collected at the start of the evaluation do not represent a true baseline. Consequently, the two staff data collection points are referred to as time-point 1 (March 2015) and time-point 2 (November 2015).

- postal, self-completed questionnaires from patients on referral to the study team at baseline (starting March 2015) (Appendix 13). Because these were new referrals to the CLPs, these do represent a true baseline. Follow-up questionnaires were collected 9 months later (Appendix 14).

- postal, self-completed questionnaire from patients in the Comparison Practices identified at the start of the evaluation (starting March 2015) (Appendix 15) and follow up 9 months later (Appendix 16).
To recruit staff in Intervention and Comparison Practices study invitation packs were left with the PMs and they were asked to distribute to all eligible staff. As for patients, the packs included Participant Information Leaflet (Appendix 17), Consent Form (Appendix 18), questionnaire, and a pre-paid, pre-addressed envelope.

For patients in Intervention Practices, the aim was to collect baseline questionnaire outcome data prior to their contact with a CLP. To enable this, at the time of referral to a CLP, the healthcare provider gave patients the study information flyer (Appendix 19) and sought permission to pass on their contact details to the research team explaining that they would make contact to discuss potential participation in the evaluation. In cases of self-referral, permission to pass on their contact details was sought by the CLP at the time of referral. However, this was not always possible, for example when the referral to the study team was made only after patients had been seen by the CLP or when patients delayed completing the questionnaire until after they had been seen by the CLP.

When this permission to contact patients had been obtained, a member of the research team telephoned patients to provide information about the evaluation and to obtain permission to mail them the study invitation pack (Participant Information Leaflet, Consent Form, questionnaire, and a pre-paid, pre-addressed envelope). On receipt of a completed questionnaire (which was considered as implied consent to participate in the trial if a completed Consent Form was not obtained), patients were mailed a letter to thank them, together with a £5 gift voucher as a token of appreciation for their time.

If there was no response 10 days after the mailing of the study materials, patients were telephoned again to confirm interest in participating and were given additional options for completing the questionnaire in either a face-to-face meeting or over the telephone with the study researcher. Patients who said they were not interested in participation were thanked for considering the invitation and reassured that the research team would not contact them again.

Patients who completed the study baseline questionnaire but who subsequently declined or withdrew from the CLP intervention reverted to the usual care provided for other patients in their practice. Unless participants requested to withdraw from the study, they continued to be followed-up and were analysed in the group to which the practice was allocated. If, however, any participant wished to withdraw from the study, no further follow-up data were requested, but data already provided were used.

In Comparison Practices, GPs were not identifying patients who might benefit from seeing a CLP so, to identify a comparison group, each Comparison Practice generated a list of a random sample of 1,000 patients from their register. The list was reviewed by a GP in the participating practice in order to remove patients for whom contact was considered inappropriate (for example recently bereaved, terminally ill). The practice then mailed the study invitation pack (as described) to the patients on the resultant list. As for patients in Intervention Practices, on receipt of a completed questionnaire, patients were mailed a letter to thank them, together with a £5 gift voucher as a token of appreciation for their time. Patients who did not return a
completed questionnaire were not followed up with any reminder telephone calls or mailings.

2.7.2 Outcome measures

Practice staff outcomes included the Team Climate Inventory; job satisfaction; Morale Assessment in General Practice Index (MAGPI); and Maslach Burn-Out Inventory. These were chosen because they were, to the research team’s knowledge, the best available, well-validated, tools to capture practice-level outcomes relevant to the activities for practice development. Knowledge of local community resources was assessed using questions used in previous similar projects in Scotland.

The primary patient outcome was health-related quality of life, measured at baseline and at 9-months follow-up by the EQ-5D-5L questionnaire. This well validated and widely used European tool was chosen as it is short, simple to complete, and also so that a cost-effectiveness evaluation could be commissioned in the future if thought to be necessary. It had previously been used by the research team in similar Deep End practices in Glasgow and found to be sensitive to change over a similar period of time to that of the present study.

Secondary patient outcome measures at baseline and at the 9-month follow-up included the ICECAP-A measure (a measure of wellbeing). ICECAP-A is a relatively new measure of wellbeing which focuses on wellbeing defined in a broader sense, rather than health. The measure covers attributes of wellbeing that were found to be important to adults in the UK. The measure is conceptually linked to Amartya Sen's capability approach which defines wellbeing in terms of an individual's ability to 'do' and 'be' the things that are important in life. ICECAP-A comprises five attributes (the lay terms are in brackets):

- attachment (an ability to have love, friendship and support)
- stability (an ability to feel settled and secure)
- achievement (an ability to achieve and progress in life)
- enjoyment (an ability to experience enjoyment and pleasure)
- autonomy (an ability to be independent).

These items were felt to be very appropriate by the research team in relation to the overall aims of the Links Worker Programme on patient wellbeing. The ICECAP-A was also designed to be used in economic evaluations.

Other secondary outcomes included the Hospital Anxiety and Depression Scale, Work and Social Adjustment Scale, the burden of multimorbidity, self-reported lifestyle activities (smoking, alcohol, exercise) and healthcare utilisation, including medication, hospital admissions, and GP and PN consultations all of which have been used in previous studies conducted by the research team in similar Deep End Practices.

2.7.3 Data collection

For patients, at baseline, data were collected on all primary and secondary outcomes as well as the number of long-term conditions and socio-demographic measures.
(age, gender, education, ethnicity, deprivation status [index of multiple deprivation based on postcode], and work status). These data were collected again 9 months after recruitment. For staff, data were collected at the study baseline (T1) and 9 months later (T2). All data were stored securely and confidentially by the University of Glasgow in line with its data-management policies.
2.7.4 Blinding

It was not possible to mask participants or healthcare professionals to the group allocation of their practice. It was also not feasible to blind members of the core study team collecting the data, but the statisticians analysing the data and all other co-authors were blinded to the allocation.

2.7.5 Sample size and analysis

The target sample sizes of 286 patients for intervention and 484 patients for Comparison Practices was designed to have 80% power to detect a minimally important effect size of 0.274 standard deviation (SD) units in the EQ-5D-5L with a 95% degree of confidence, assuming an intra-class correlation of 0.01 and a 50% follow-up rate. This sample size would provide 90% power to detect an effect size of 0.316 SD units under the same assumptions.

Patient outcomes were summarised as a whole and by intervention and comparison group at baseline and follow-up, and as changes over time. The primary analysis was on an intention-to-treat (ITT) basis using all available data. This means that all patients who were referred to a CLP (irrespective of whether they saw one or not) were included in the analysis. Although ITT is the recommended way to analyse RCTs, and thus should be regarded as the primary approach, in studies such as the present one, which are more exploratory in nature, a ‘per protocol’ analysis is also permissible, which should be regarded as supportive of the ITT approach. In a per protocol approach sub-groups of patients can be investigated, for example those who actually saw a CLP, and those who took up the offer of a community resource.

Differences between intervention and comparison group were tested using appropriate mixed-effects linear or generalised linear regression models, allowing for clustering by practice and including an adjustment for the baseline value of the outcome measure. Since the comparator patients were respondents from a randomly selected sample, there was likely to be differences at baseline compared with the intervention patients, who were respondents from a group of patients referred to a CLP. Regression methods were therefore used, to control for selection bias, including adjustment for baseline factors (such as age, gender, deprivation, comorbidities, and other variables that differed between the two groups at baseline). The modelling approach taken is shown in the results.

Analysis of staff outcomes compared total scores for each measure at first measurement and follow-up and as changes over time between the intervention and comparison groups using appropriate statistical methods. The variation between practices within both groups was also examined.

2.8 Data Synthesis

The approach adopted to synthesise findings between the process and outcome evaluations had elements of what O’Cathain et al described as:
• ‘following a thread’ (in which each dataset is first analysed to identify main findings and key themes and questions requiring further exploration are identified,) and
• ‘triangulation’ (in which each dataset is first analysed to answer specific questions and then integrated).

Specifically, having identified two types of Intervention Practice, Fully Integrated and Partially Integrated, in later stages of the analysis of data from the process evaluation the differences between these types of practices on staff and patient outcomes were explored (‘following a thread’). However, to specifically address aim 4, which considered effectiveness of the Links Worker Programme and the factors that contributed to this, an adapted approach to the ‘triangulation protocol’ was used. A matrix was drawn up in which findings on effectiveness, and reported activities at patient, practice and community levels, in relation to whether they converged and diverged and where there were no data available on the topic from that dataset.
3. Results: the Process of Implementing the Links Worker Programme

Chapter 3 presents the results of the process evaluation designed to address aim 2 in the evaluation brief which was to understand the implementation and delivery of the Programme.

The responses to data collection are reported in section 3.1). The subsequent sections address the specific objectives of the evaluation.

Section 3.2 details the variation in the adoption and delivery of the Links Worker Programme between Intervention Practices, and describes what staff in Comparison Practices were doing in relation to linking their patients to community resources (addressing objectives a and b). Section 3.3 moves onto describe in some detail the processes through which staff in Intervention Practices established and maintained links and connections between patients, practice team members and COs.

Section 3.4 further explains why implementing links-like activities in Comparison Practices was constrained (addressing objective c).

Section 3.5 describes views on the sustainability of the Programme (addressing objective d).

Section 3.6 presents the reported experiences of the Programme (addressing objective e).

3.1 Response Rates to Data Collection

With the support of PMs, as reported in the interim report19, it was relatively easy to set up focus group discussions in both Intervention and Comparison Practices.

Sixty-two potential participants were invited to participate in the first email survey, and responses were received from 52 (84%) between June and October 2015. Fifty-four potential participants were invited to participate in the second email survey, and responses were received from 32 (59%) between June and October 2016. Fewer representatives of COs responded to the second survey. This may be because they had already taken part in the sub-study on perspectives of staff working in COs.43 The response to the survey from each type of respondent in each practice is shown in Appendix 20.

In Intervention Practices, in-depth interviews were conducted with all 7 lead GPs and 6 of 7 CLPs (one was unavailable). End of evaluation interviews were conducted with 6 lead GPs (one did not respond), 6 CLPs (one was unavailable) and 7 PMs.

Interviews were conducted with 12 patients registered with an Intervention Practice. As explained in the methods sections, attempts were made to obtain a range of views from men and women of different ages with at least two different reasons for referral to
a CLP (including mental or physical health or social problems). However, as recruitment continued it became difficult to recruit patients meeting these criteria because patient information on reasons for referral was often incomplete. Also, as is often the case when working with patients in very deprived areas, some patients were difficult to contact. Consequently, patients with only one recorded reason for referral were also included. The characteristics of patients are summarised in Table 1.

Table 1. Characteristics of Patients Interviewed

<table>
<thead>
<tr>
<th>Patient Characteristic</th>
<th>REFERRAL REASONS</th>
<th>Tota l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mental Health &amp; Physical Health</td>
<td>Mental Health &amp; Social Problem</td>
</tr>
<tr>
<td>Gender</td>
<td>Age in years</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>16-49</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>50-80+</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>16-49</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>50-80+</td>
<td>-</td>
</tr>
<tr>
<td>ALL PATIENTS</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

3.2 Variations in the Adoption and Delivery of the Links Worker Programme

As described in the interim report, in the early days of the evaluation, nine months after the Programme itself was initiated, Intervention Practices had planned activities at three levels:

- patient level activities: staff working one-to-one with patients.
- practice level activities: planning or running activities focussing on staff wellbeing, and promoting a community-orientation through shared learning.
- community level activities: developing links with community-based organisations.

By the end of the evaluation period, the flexibility inherent in the Programme led to variation in the extent to which, and how, Links Worker Programme related activities were undertaken or sustained. As data collection and analysis progressed key differences in implementation emerged so that by the end of the evaluation period two groups of practices could be discerned. The groups of practices, which were called ‘Fully Integrated’ and ‘Partially Integrated’, differed in the extent to which patient-, practice-development and community-linking activities were integrated and sustained into practice routine.

Three practices could be described as ‘Fully Integrated’ in that the core patient, practice and community level activities described in the theories of change (section 2.4) seemed to be well integrated into practice routine so that these activities had become normal for staff members. Four practices could be described as ‘Partially Integrated’ in that although most core patient-level activities were well-integrated,
some patient and most practice-level activities were less well sustained and community networking, though present, was more reactive than proactive.

The categorisation into Fully and Partially Integrated Practices is descriptive; it emerged from qualitative data analysis rather than being developed as a way of explaining outcomes. Key features of this variation are described later in the report, but first it is considered how activities varied at patient level.

3.2.1 Variation in adoption and delivery of Links Worker Programme for patient level activities in Intervention Practices

The Programme’s theory of change (detailed in section 2.4) suggested that practice staff (and specifically non-clinicians such as reception staff, clinicians such as GPs and nurses and CLPs) should be involved in engaging patients in COs and in working one-to-one with patients. It was implicit that much of the one-to-one activities would be undertaken by the CLP.

By the end of the evaluation all Intervention Practices reported good progress in most patient level activities. In each practice GPs, CLPs and PMs talked of GPs referring patients to CLPs, signposting patients to COs, and CLPs working one-to-one with patients. However by the end of the evaluation, only those CLPs who worked in Fully Integrated Practices said that the receptionists were actively involved in signposting patients and that this aspect of their work was now routine. Staff in Fully Integrated Practices also detailed practice-level activities they had organised, such as walking groups or a patient-engagement group. These sorts of activities did not emerge in accounts from Partially Integrated Practices. These similarities and differences are summarised in Figure 3 and the detailed analysis to support these conclusions follows.

Figure 3. Patient-level Activities in Partially Integrated and Fully Integrated Practices

<table>
<thead>
<tr>
<th>Activities to support patients by the end of the evaluation</th>
<th>Partially Integrated Practices (Number = 4)</th>
<th>Fully Integrated Practices (Number = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPs refer to CLPs</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>GPs signpost to community organisations</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Receptionists signpost to community organisations</td>
<td>Less likely to be reported as well integrated by CLP and GP</td>
<td>More likely to be reported as well integrated by CLP and GP</td>
</tr>
<tr>
<td>CLPs working one-to-one with patients</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Practice-organised activities for patients</td>
<td>Less likely to be reported as on-going</td>
<td>All reported on-going activities</td>
</tr>
</tbody>
</table>

In both Fully Integrated Practices and Partially Integrated Practices, staff described having established similar flexible systems for referring patients to the CLP:
'the referral process is that if we see somebody, if the Practice Nurse sees somebody, if the district nurse sees somebody that they think would benefit or has a need, you know, that is being unfulfilled, that they’re struggling in a particular way, then we – will, you know, speak to [the CLP], and say “Is this something that you think you would be able to look at for us?” Make contact, we’ve discussed it with the patient, said that we’ve got a colleague working with us who has got expertise in this particular area and her role is to look at the, you know, maximising the resources that are in the community and to see if there’s any of these resources, so, you’re struggling in this particular way but it may be that there’s something in the community that would be able to help you.’

GP 4, Partially Integrated Practice, in-depth interview

‘within the practice generally what happens is the GP has an appointment with their patient and they discuss their issues, generally starts with medical issues, but then if there’s underlying social issues causing or affecting those medical issues they will ask the leading questions and they will tell them about me and will suggest they see me.’

CLP 4, Fully Integrated Practice, in-depth interview

GPs in all 7 Intervention Practices also reported that they signpost to COs, with at least one also reporting making direct referrals. For one GP, the presence of the CLP had increased confidence in the organisations:

‘… what I'm finding more and more is I can say to patients “Have a think about this organisation. We've got a few people who've found it helpful” and I can do that with confidence because I know [the CLP] has maybe been with one person [to the organisation] then sent another, you know?’

GP 5, Partially Integrated Practice, in-depth interview

In Partially Integrated Practices, CLPs and GPs were less likely to report the involvement of reception staff in signposting patients to community resources. For example, one CLP believed that receptionists were not signposting with the exception of one staff member:

‘I don’t think so. I mean, one of the reception staff is – she is, in her personal life, she has been a volunteer, you know… So, she has a different perspective already so you can see her having different conversations with staff but not necessarily anybody else.’

CLP 2, Partially Integrated Practice, end-of-evaluation interview

In Fully Integrated practices, however, there was much more explicit discussion of receptionist’s signposting patients to community resources, and making the occasional referral for patients to see the CLP:

‘If the receptionist had booked an appointment at one of the community organisations… They’d [people in the community organisation] be quite happy... to call up [to enquire about a referred person] – “Oh, that person didn’t call up”, and [The Receptionist] might ring the person up and go… “They said that you didn’t turn up. Do you want any support?”…’

CLP 5, Fully Integrated Practice, end-of-evaluation Interview

In all 7 Intervention Practices, CLPs reported working intensively one-to-one with patients. The intensive work CLPs did with patients is described in detail in the section 3.3.1.
All Fully Integrated Practices organised activities for their patients, but only a few Partially Integrated Practices did. While the most common activity was walking groups, one Fully Integrated Practice had started a group for isolated patients to provide mutual support for each other. As one GP said:

‘This is satisfying because of the visible benefits to the people who are attending, because it is a response to a problem identified by the patient group themselves (we initially had only set up a short life patient consultation/participation group), because of the links and connections it has brought with other organisations, and because it is an expression of the values we hold as a practice that we are co-producers of health with patients themselves.’

GP 1, Fully Integrated Practice, 2nd questionnaire

The Programme’s theory of change suggested that referral to a CLP, signposting, one-to-one engagement and practice level activities would result in patients being more able to acquire and use available skills, information and support. This was expected to lead, in turn, to patients better self-management of health conditions, better ability to navigate systems, avert crises and adapt to challenges, which was also expected to lead to improved relationships with professionals and a sense of being valued as a ‘whole person’.

There were some examples of these sorts of outcomes in some of the patient accounts, although they were not universally expressed. For example, following referral to a Carer’s Organisation by the CLP, Patient 1 felt able to contact it again if needed, thus could now access support without additional help:

Yeah. She referred me to the Carers Centre, and that, that other place.

Interviewer: So you’ve engaged with those two (yeah) services, and you found them helpful.

Yeah. Oh definitely, uh-huh.

Interviewer: Are you still engaging with them?

The Carers Centre, I still get emails [from them] on what’s going on and things like that. And if I need to then I know that I always go, go back and have an appointment to see them.

Patient 1

On the other hand, another patient had not managed to engage with the craft-based CO to which the CLP had made a referral, had felt no benefit, did not mention knowing how to access further support, and had received no follow-up by the CLP. The interview involved both the patient and the patient’s mother:

Interviewer: So you knew you were going [to the CO] to, you know, mess about with boats maybe?

Yeah, uh huh.

Interviewer: Was this something that you enjoy or not to so much?
Just went there to see if I like it right then. …

(Patient’s mother) There was night-time but I think you could go during the day as well ‘cause I took you in the afternoon.
Aye, aye. It was a wee bit crowdy.
(Patient’s mother) Aye, right.
A lotta people.
(Patient’s mother) Aye, just maybe… I think it was too much for [patient]. Too much going on at the one time. Which [the patient] finds is quite hard … to kinda like digest a’ this, you know, like just too much going on ‘cause … concentration isnae good. An’ … short-term memory isnae good so, like, it’s quite for … tae focus on one particular…
Patient 7

Patient 5 was encouraged to go to the practice’s walking group, and felt benefit from this:

it’s all… the past few month, I’ve actually started feeling that bit better and see before that? I did nothing, I walked aboot in my days just dae’in things that I’m supposed to be dae’in, do you know what I mean? So, it was… but fae I’ve been here [the walking group], I mean, I can go oot, I can laugh, and I can joke noo, wi’ the walking group. An’ that. We get on good…

…Don’t get me wrong, I’ve still got a lot of problems wi’ my health wi’ pains which I don’t have a clue what they are because naebody knows what they are, but I’ve learned to, kinda, handle them noo. I’m no’ getting mysel’ into such a state, thinking ‘I’m gonnae die and then they’re gonnae find out what the heck’s wrong wi’ me.’ Right. That was going through my heid an awful lot of times.
Patient 5

On the other hand, Patient 10 did not find the community activity to which a referral had been made helpful, and did not talk about other activities. The interviewer asked about specific classes:

Interviewer: Did you find it helpful?
Yeah, at the beginning, I found it a bit helpful. I think it was quite a—it was helpful.

Interviewer: How was it helpful?
Well what it did – to be honest wi’ you, when I heard aboot them… […] I was quite surprised because when I—’cause they said it was breathing classes, I obviously thought, what I thought was it was gonnae be to help you breathe, like, a different kind of breathing (interviewer: yeah, yeah), if you know what I mean? Right? Like breathing. But then when I went I discovered it wasnae, it was exercises, do you know what I mean? And, so, that was a surprise, but I enjoyed it, as I say, for a wee while. But, ach, I stopped going.

Interviewer: Right.
You know? I got a bit fed up wi’ it, if you know what I mean?

Interviewer: Yeah.
Aye. But I liked it at the beginning but, ach, I just… What had happened was I just, like, it was, like, a Tuesday and a Thursday, but sometimes I had other things tae dae and things like that, you know?
Patient 10

Patient 8 was relatively new to the practice and did not feel known by the GPs. This patient contrasted the experience with the doctors in the practice to with the CLP, who seems more willing or able to build a relationship with the patient, which implies he felt more valued:

Wae the doctors [in this practice] because it’s all new to me, in the new practice, I don’t have any … attachment to the doctors, if you like. It’s a doctor, that’s it, finished, you know? But speaking to [the CLP] seems to have the same sort o’ – what’s the word? It’s the same sort o’ feeling that [patient used to have in his previous practice – of being known], you know, [the CLP] wants to try and develop our relationship, type thing, you know?
Patient 8

However, not all of the 12 patients interviewed felt supported to live well. Patient 3 had become unemployed and was referred by the CLP to a community resource. This patient got some, but not a lot, of help from the CO and did not see the CLP again:

Well, as I say, wi’ [the CLP], I seen [the CLP] for ten minutes.
Interviewer: Right, okay.
And that’s it. I never heard fae [CLP]. I never heard fae [CLP] again.
Interviewer: Right, okay.
So… Just a case where [CLP’s] pointed me in the right direction, but I don’t know if [CLP] got reports fae [CO Staff] or what have you. I just put it doon tae, ‘Well, that’s it’, you know what I mean? ’That’s done’, that’s, ‘[patient’s] away.’
Patient 3

By the end of the evaluation, it was clear that all Intervention Practices had made good progress in most patient level activities. All practices had instigated referral processes through which GPs could refer to CLPs, all GPs were signposting patients and all CLPs were spending time one-to-one with patients. The Fully and Partially Integrated Practices differed in the extent to which reception staff were fully engaged in signposting and also in the extent to which staff organised practice-based activities. There was some evidence, from patient accounts, that the theory of change was working as expected to improve ability to find help oneself, to self-manage problems and felt valued by the CLP although this experience was not universal and some did not find the CLP or CO useful at all.

3.2.2 Variation in adoption and delivery of Links Worker Programme for practice level activities in Intervention Practices

The Programme’s theory of change, detailed in section 2.4 suggested that practice-level activities would be undertaken to support the team’s own wellbeing; activities to
developed shared learning and awareness about community resources; gathering ‘intelligence’ about what is available to ‘signpost’ patients to resources and solving problems through the redeployment of staff. It was these kinds of practice-wide development activities that differentiated the Glasgow ‘Deep End’ Links Worker Programme approach from other forms of social prescribing.

In the early days of the evaluation all seven Intervention Practices had tried some of these kinds of activities. As reported in the interim report,\textsuperscript{19} they had tried relaxation or walking classes for staff to improve team wellbeing, had protected sessions for all practice staff to increase awareness of COs and resources, through doing this improved ‘intelligence’ about what resources are available in local communities and said they were planning new systems so as to be able to redeploy staff.

By the end of the evaluation only respondents in Fully Integrated Practices reported ongoing activities that focussed on team wellbeing and shared learning, and ongoing use of information systems like the ALISS (A Local Information System for Scotland) website (https://www.aliss.org). The similarities and differences in practice-level activities between Partially and Fully Integrated Practices are summarised in Figure 4.

**Figure 4. Practice Level Activities in Partially and Fully Integrated Practices**

<table>
<thead>
<tr>
<th>Practice Development Activities</th>
<th>Partially Integrated Practices (Number =4)</th>
<th>Fully Integrated Practices (Number = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team wellbeing</td>
<td>Fewer if any activities for team wellbeing</td>
<td>Ongoing activities for team wellbeing</td>
</tr>
<tr>
<td>Shared learning and awareness</td>
<td>Less engagement in shared learning activities</td>
<td>Ongoing activities for shared learning activities</td>
</tr>
<tr>
<td>Use of information systems e.g. ALISS</td>
<td>Less ongoing use</td>
<td>More ongoing use</td>
</tr>
</tbody>
</table>

In relation to activities for team wellbeing staff in one Fully Integrated Practice reported making time to interact with each other off-site:

‘and I think the simple fact of having one afternoon a week where we go off site and we just sit and talk to each other, and have a coffee together, and interact in a more human way, it’s had a real change in the whole dynamic of the practice…’

GP 1, Fully Integrated Practice, end-of-evaluation interview

This view contrasts with that of another CLP in a Partially Integrated Practice:

‘yes, there’s a good rapport and the staff, you know, the administrative staff go out and things. But there is a disconnect between admin staff, and the GP staff. The admin staff as well don’t get team meetings. They don’t get opportunities to come together as a team and share information so communication sometimes can be a bit poor at different times.’

CLP 2, Partially Integrated Practice, end-of-evaluation interview

Staff in Fully Integrated Practices also reported doing shared learning activities together for which time was made formally. However, this was reported much less
from staff in Partially Integrated Practices, and indeed, some CLPs felt thwarted in their ambitions:

‘some of the structures that I might have expected aren’t here. They haven’t allowed me to action things in the way I would have liked. So I’m having to use other means, that’s with the kind of informal chats or taking the opportunity when you get it, to share information, rather than the more formal structures of team meetings, and things like that, they just aren’t here. So, I’ve had to adapt tae the environment I’m in.’
CLP 6, Partially Integrated Practice, in-depth interview

Finally, Fully Integrated Practices also seemed to engage more with the use of information systems to improve Intelligence, for example not only using the ALISS website but integrating it further into the practice way of working:

‘I think we’re gonna do more pieces of work, the integration of ALISS and all that at the front desk, so that the receptionist will be more skilled in identifying immediate problems i.e. maybe domestic abuse and getting somebody inside that knows and somebody immediately to Woman’s Aid, that kind of stuff. And of course by doing that, there’s an opportunity for somebody to get the external support that they need without needing a GP.’
CLP 4, Fully Integrated Practice, end-of-evaluation interview

This was much less apparent in the Partially Integrated Practices.

The Programme’s theory of change suggested that practice-level activities were expected to lead to improvement in team members’ personal wellbeing; to their ability to provide appropriate, timely information to patients; to gain better skills in identifying and supporting patients who need help; and to having sufficient time to listen and advise and support people who face multiple problems.

Staff wellbeing in relation to views on team climate, job satisfaction, morale and burn-out is reported in Chapter 4. It was clear, though, that difficult team dynamics made it hard to implement activities for staff wellbeing in Partially Integrated Practices. For example one CLP described the atmosphere in the practice as:

It’s a parent-child relationship. Do you know like authoritarian, dictatorship, you know, ‘this is it, this is the way it’s gonna go’ rather than a collective, sorta ground-up approach
CLP 8, Partially Integrated Practice, end-of-evaluation Interview

The CLP in this practice also had difficulty arranging visits to COs for staff because of factions amongst the reception staff.

Another reason not to focus further on activities for team wellbeing was that GPs and the PM in one practice did not feel they needed it. For example:

So it’s not been something that from our perspective we’ve needed a great deal of assistance with. You know, if the wheel’s… If the wheel’s working why change it? So we didn’t need to have any kind of team bonding exercises because the team working ethic in the practice works so well, to be honest.
GP6, Partially Integrated Practice, in-depth interview
While agreeing on good staff rapport in the practice, the CLP in this practice provided a different perspective:

yes, there’s a good rapport and the staff, you know, the administrative staff go out and things. But there is a disconnect between admin staff and the GP staff. The admin staff don’t get team meetings. They don’t get opportunities to come together as a team and share information, so communication sometimes can be a bit poor at different times. Because I’m sitting in reception, you see and hear a lot of that. But when you, kind of, raise these things, sort of tactfully, and say “Well, maybe team meetings and, you know, well, you know, you could always, blah, blah” and these sort of things, they’re not really taken on board because the doctor thinks “Well, we don’t necessarily need that.”

CLP2, Partially Integrated Practice, end-of-evaluation interview

In one Partially Integrated Practice the practice-level activities were enthusiastically supported but maintaining them proved impossible with the long-term absence of the CLP.

Practice-level activities were seen as essential in the theory of change and are what differentiates the Links Worker Programme from other social prescribing initiatives. By the end of the evaluation, it was apparent that only the three Fully Integrated Practices had enthusiastically continued to embed practice-level activities to improve wellbeing into the routine activities. These practices had also established processes to use available information systems to use intelligence on locally available resources. For various reasons, including more difficult team dynamics discussed further in section 3.2.2, Partially Integrated Practices were less able to embed these kinds of activities into the life of their practice.

3.2.3 Variation in adoption and delivery of Links Worker Programme for community-level activities in Intervention Practices

The Programme’s theory of change suggested that practices would undertake activities to cultivate relationships with local COs; development of referral pathways and multi-agency resolution of problems; and events to enable shared learning to consolidate new and existing community linkages. This was expected to lead to established cross-sectoral referral pathways; joint resolution of shared problems; improved practice knowledge and intelligence about local COs and services provided; and improved capacity of local COs to support people. This, in turn, was expected to result in better use of resources to support people to live well, a more community-oriented practice identity and eventually, the establishment of the practice as a community hub.

As reported in the interim report, early in the life of the evaluation almost all practices had plans to, or had already, undertaken activities to link directly with COs. These activities were at the very heart of the Programme and were seen as important by practice staff.

The sub-project report on COs’ perspectives on the Programme highlighted that community networking activities led by CLPs were highly valued by staff in COs at
least partly because it had been difficult in the past to gain inroads into practices or to work with practice staff. In relation to the theory of change, there were some examples of cross-sectoral referral pathways and joint resolution of shared problems, at least from the perspective of staff in COs. The actual and potential advantages reported for these links included the CLP being able to operate as a case manager for some patients, facilitating input from different organisations in a way that met individual needs suggesting a better use of resources so that patients could ‘live-well’.

Some staff in COs also reported that referrals to them had become more appropriate, some said that CLPs had facilitated links between COs themselves and, in two examples, they reported CLPs having facilitated funding applications for COs suggesting that in these cases the practice had begun to operate as a community hub.

By the end of the evaluation, CLPs in all Intervention Practices reported undertaking community-networking activities but they differed in relation to how proactive they were able to be.

In Fully Integrated Practices, CLPs reported ongoing, proactive activities to establish and maintain links between practices and COs. These activities include the CLPs making time each week to link directly with staff in COs; making time to spend outside the general practice getting to know staff in COs and what they can offer; working with staff in COs around the specific needs of individuals as well as groups of patients more generally; facilitating links between COs through visits of other staff to them or visits of CO staff to the practice. These activities were highly valued by the CLPs in Fully Integrated Practices:

‘I sit on steering groups in the health centre. Sit on the arts and environmental steering group which is about the health centre and how it’s linking in with regards to arts and, like, so, like the back garden, the community garden have involvement in that, and more strategic planning of that. Then I sit on the community orientated primary care group, which is across the whole health centre…, and it’s about, obviously, community-orientated primary care, linking them in, getting an awareness of what’s going on in the local area.’

CLP 5, Fully Integrated Practice, in-depth interview

In most Partially Integrated Practices, however, CLPs reported a more reactive approach to community networking. This meant that although they did continue to make new links and maintain existing ones, the linking was often led by casework with individual patients. They were not able to make the time to develop, on an on-going basis, a more strategic view of what was locally available and needed for different groups in the community. Some CLPs reported regret at being unable to do more proactively:

I would like to be more, I think I would like to be more proactive. Whether that’s possible, like instead of someone coming to me, and me having a conversation with someone and then saying, “Right, ok, let’s look at what’s out there.” What I would quite like to do is to be able to go out and walk around [PLACE NAME], or [PLACE NAME], or whatever and—

Interviewer: Was it something that you did initially when you started?
Yes, when we first started.
CLP 2, Partially Integrated Practice, end-of-evaluation interview

In the Partially Integrated Practice whose CLP was on extended leave, although the PM had wanted to continue with networking activities, she did not have the time to do so. In response to a question about what had not gone so well in the email survey PM3 wrote:

Network Building – Too time consuming to allow me to do this. The networking done by our CLP was very helpful. Knowing what resources there are out in the community benefits the team to confidently inform a patient about a service.
PM3, email survey 2

At the time of publication of the sub-project report on community links 43, there were some examples of cross-sectoral referral pathways and joint resolution of shared problems which suggested the theory of change was being implemented. There was also some suggestion that practices and COs were beginning to be able to make better use of resources by the CLP operating as a sort of ‘case manager’ for a patient. Some staff in COs also reported that referrals to them had become more appropriate. By the end of the evaluation although all practices still recognised the importance of community networking and had established some on-going relationships, it continued to be more proactive and embedded in Fully Integrated Practices. In Partially Integrated practices embedding proactive community-networking proved difficult for a range of reasons.

3.2.4 Variation in use of resources by Intervention Practices

Apart from the CLP, the main resource received by practices is the practice development fund, a sum of £35,000 for each practice to spend on implementing the Links Worker Programme, mainly on patient support, practice development, and community networking activities44.

Analysis conducted by the Alliance45,46 found that in the first year of operation, 79% of practices’ development budget was used for creating more time, particularly clinical time for GPs (and PN in one practice) to have longer consultations with patients. Practices also invested to free up receptionist time, by, for example, hiring another receptionist or purchasing self check-in systems. This investment had been clear by the time the interim report19 was submitted and practice investment in more time for practice development was identified as a major resource underpinning any changes that were planned and implemented.

Table 2 uses the same data from the Alliance to investigate differences in expenditure between Partially and Fully Integrated Practices in the first year of the evaluation. It shows that although all practices invested in systems or activities that would free up clinical and administrative time, the Fully Integrated Practices spent more, on average, than Partially Integrated Practices in year 1.

All practices used the majority of the practice development fund to buy time. However, Fully Integrated Practices seemed more able to spend the resource, on a wide range
of activities not otherwise categorised, in year 1 of the Programme compared to Partially Integrated Practices.

Table 2. Mean Expenditure of Practice Development Fund in Year 1 of Programme in Partially Integrated and Fully Integrated Practices (n)

<table>
<thead>
<tr>
<th>Supported Activity</th>
<th>Partially Integrated Practices (Number = 4) Mean Expenditure in £s</th>
<th>Fully Integrated Practices (Number = 3) Mean Expenditure in £s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Time</td>
<td>7,958</td>
<td>6,696</td>
</tr>
<tr>
<td>Admin Time</td>
<td>2,895</td>
<td>1,124</td>
</tr>
<tr>
<td>Protected Learning</td>
<td>699</td>
<td>1,314</td>
</tr>
<tr>
<td>Equipment</td>
<td>1,194</td>
<td>774</td>
</tr>
<tr>
<td>Website</td>
<td>161</td>
<td>214</td>
</tr>
<tr>
<td>Premises</td>
<td>342</td>
<td>409</td>
</tr>
<tr>
<td>Health Promoting Practice</td>
<td>1,126</td>
<td>122</td>
</tr>
<tr>
<td>Self Check-In</td>
<td>135</td>
<td>2,262</td>
</tr>
<tr>
<td>Community Development</td>
<td>190</td>
<td>931</td>
</tr>
<tr>
<td>Access</td>
<td>0</td>
<td>880</td>
</tr>
<tr>
<td>Other</td>
<td>557</td>
<td>3,926</td>
</tr>
<tr>
<td>TOTAL</td>
<td>15,257</td>
<td>18,652</td>
</tr>
</tbody>
</table>

1 Expenditure allocated creating additional clinical time to allow longer consultations and/or an increased number of standard duration consultations. 2 Expenditure to increase in general administrative/reception capacity will create space for the staff team to take on links learning and responsibilities. 3 Expenditure to release staff time released by, for example locum or GEMS cover, purchased via the programme development grants, is intended to provide an opportunity for practice team ‘links learning’ activity.” This category may also include protected learning activities. 4 Expenditure to purchase office-related equipment 5 Expenditure to develop and maintain practice website 6 Expenditure for improvements in the layout and aesthetic of their premises in order to engender a more welcoming and comfortable environment. 7 Expenditure like purchasing fruits from local vendors 8 Expenditure to purchase Self Check-In machines 9 Expenditure to support community networking activities 10 Access to rooms in some practices has meant electronic scanning of medical records to physically free up a consultation space” 11 Other includes uses of the fund not already categorised. (Email correspondence with the Alliance, 8th February 2017). All explanations provided by The Alliance.

3.2.5 Potential explanation for variation in adoption and delivery of the Links Worker Programme

Cross-case comparison between Partially and Fully Integrated Practices suggested four, inter-related, factors concerning the practice context could at least partially explain the variation in extent to which Links Worker Programme activities had become embedded in practice routines.

They are:
- Leadership of the programme.
- Relationships within the practice team.
- Continuity of CLP support within the practice.
• Influence of other innovations happening alongside the Links Worker Programme.

Figure 5 summarises how these features vary between Partially Integrated Practices and Fully Integrated Practices.

**Figure 5.** Practice-specific Contextual Factors in Partially and Fully Integrated Practices

<table>
<thead>
<tr>
<th>Contextual Factors</th>
<th>Partially Integrated Practices (Number = 4)</th>
<th>Fully Integrated Practices (Number = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Less collective leadership</td>
<td>More collective leadership</td>
</tr>
<tr>
<td>Team relationships</td>
<td>Challenging team relationships</td>
<td>Enabling team relationships</td>
</tr>
<tr>
<td>Continuity of CLP support</td>
<td>Interrupted CLP support</td>
<td>Continued CLP support or transition handled well</td>
</tr>
<tr>
<td>Influence of other innovations</td>
<td>Influence from other ongoing innovations</td>
<td>No influence from other ongoing innovations</td>
</tr>
</tbody>
</table>

Leadership of the Programme in Fully Integrated Practices was shared between the lead GP, PM and CLP, and good working relationships and trust had developed in relation to the delivery of the Programme. The collective and shared leadership was reflected in increasing levels of understanding of each other's roles and of the team working together to implement the Programme:

‘I am continuing to provide leadership but have been pleased to see the wider team taking on roles and for activities such as the learning times to be embedded now in practice activities.’
GP 1, Fully Integrated Practice, 2nd questionnaire

Leadership in Partially Integrated Practices, on the other hand, was less collective. In the next extract CLP 2 tried to explain, diplomatically, that there were different views on the role of practice development within the practice:

‘But I suppose the kind of practice development part of it hasn’t really, you know, kind of happened… So [...] when I mention things, and he’ll be like, “Oh that’ll be great for the [other innovation].” And I’m like, “No… that’s not the [other innovation] — this is the Links Programme.”... So yeah... he probably does have clear ideas what he wants.’
CLP 2, Partially Integrated Practice, in-depth interview

Team relationships were well established in Fully Integrated Practices:

‘We all talk to one another and [the CLP] and myself have regular conversations, you know, to obviously make sure that, you know, everything’s working well, cause as far as we’re concerned if something’s maybe upsetting [the CLP] or maybe something’s upsetting one of the other girls [receptionists] — it has an impact. So we try and deal with things as they come in and we’ve been very lucky.’
PM 1, Fully Integrated Practice, focus group discussion
Whereas team relationships tended to be less cohesive in Partially Integrated Practices:

‘Practice staff seem to no longer be interested in the [Links Worker Programme] relationships seem to have broken down and apart from the clinical staff, there is little or no interest in the project at the moment.’
PM 2, Partially Integrated Practice, 2nd questionnaire

Two Partially Integrated Practices and one Fully Integrated Practice experienced turnover of CLP staff during the evaluation. In the Fully Integrated Practice, this was managed whereby the ‘new’ and ‘old’ CLPs were able to overlap for a short period, which allowed a shadowing process to take place with better continuity of patient support. In one Partially Integrated Practice, the CLP absence was unexpected and hence unplanned. Although cover was provided for some patient-level one-to-one work, it was not possible to cover practice-level and community-level activities which hampered this practice’s development.

Finally, while both Fully Integrated Practices and Partially Integrated Practices reported other ongoing innovations being implemented in the practice, Partially Integrated Practices appeared to be more affected than Fully Integrated practices:

‘that makes the things a bit difficult because [the GP’s] focus is on that [other innovation] and not really on the Links.’
CLP 2, Partially Integrated Practice, In-depth Interview

This suggested that leadership in the practice was distracted away from the Links Worker Programme, an issue which is clearly related to leadership being more or less collective in the practices as well as to the strength of team relationships.

Four inter-related features of the practice context seemed to influence implementation of the Links Worker Programme. Fully Integrated Practices seemed able to develop a shared leadership style, which allowed each to be influential in developing and embedding Links activities. There also seemed to be better team dynamics in Fully Integrated Practices although it is not known whether this pre- or post-dated the introduction of the Programme. In Partially Integrated Practices, the loss of a CLP without adequate cover hampered practice- and community-level activities from becoming embedded. In another, the lack of continuity of CLP support compounded ongoing difficulties in implementation due to other factors. One Fully Integrated Practice was able to support a smooth transition of CLP support. Finally, the presence of other practice innovations seemed to hamper Links-activities more in Partially than in Fully Integrated Practices.

3.2.6 Variations between Comparison Practices

As already described, in the interim report,19 that although staff in Comparison Practices understood the potential of the Programme they were not able to enact any of the activities because of lack of resources, expressed as lack of staff or time.

This was still the situation by the end of the evaluation. Of the eight Comparison Practices, only two reported to be doing Links-like activities. In one practice, the lead
GP reported that the practice welcomes COs to come to visit to talk about their services but that it does not proactively invite organisations to do so. In another practice, the lead GP reported social prescribing (what in Intervention Practices they would describe as ‘signposting’) as a routine part of practice activity. This practice also reported activities to promote team wellbeing including staff away-days\(^2\), two half-day activities when the entire practice focused on practice development, and weekly educational and practice business meetings. Finally, this practice also seemed to manage some level of community networking through involvement in a community-orientated primary care group. However, the lead GP for this practice also reported how difficult it was to sustain these activities in the absence of additional support.

In summary, staff in Comparison Practices understood the potential of the Links Worker Programme. However, in the absence of any resource, only two practices were able to implement any links-like activities at all; one of these practices was involved in a community-orientated primary care group.

### 3.2.7 Summary of variations in implementation and comparison with activities described in theories of change

- Programme theories of change identified three levels of activity (at patient, practice and community levels) as important to achieve patient outcomes.
- Two two types of Intervention Practice were identified, ‘Fully Integrated’ (3 practices) and ‘Partially Integrated’ (4 practices).
- All Intervention Practices established one-to-one support for patients, instigated processes through which GPs could refer to CLPs, all GPs were signposting patients, and all CLPs were spending time one-to-one with patients.
- Only in Fully Integrated Practices were reception staff fully engaged in signposting patients to COs. There was also more practice-based activities like walking groups described in Fully Integrated Practices.
- Analysis of patient accounts suggested that the theory of change was working as expected to improve ability to find help oneself, to self-manage problems and feel more valued. However, this experience was not universal and some patients did not find the CLP or CO useful at all.
- Three Fully Integrated Practices had embedded practice-level activities to improve wellbeing and increase shared learning into routine activities. They had also established processes to use available information systems to use intelligence on locally available resources.
- For various reasons, including more difficult team dynamics discussed further in section 3.2.2, Partially Integrated Practices were less able to embed these kinds of practice-level activities into the life of their practice.
- Theories of change at community-level were ambitious, but there was evidence that at least some short-term outcomes were being achieved. For example, some staff in COs also reported that referrals to them had become more appropriate.
- On-going networking, in a strategic, proactive way seemed to be embedded only in Fully Integrated Practices. In Partially Integrated Practices embedding

\(^2\) It was not clear from the interview if staff away days included all staff or only some.
proactive community-networking proved difficult although reactive networking continued.

- Practices used the majority of the practice development fund to buy clinical and administrative time. Fully Integrated Practices seemed more able to spend the resource, on a wide range of activities not otherwise categorised, in year 1 of the Programme.

- Four inter-related features of the practice context influenced implementation of the Links Worker Programme. Fully Integrated Practices had a shared leadership style and better team dynamics. In the absence of strong collective leadership and with less good team dynamics, interruption of CLP input and the presence of other innovations seemed to hamper all but patient-related activities in Partially Integrated Practices.

- In the absence of any resource, only two of eight Comparison Practices undertook any links-like activities at all. One of these practices was already involved in a community-orientated primary care group.

3.3 How Intervention Practices Established and Maintained Connections

Intervention Practices needed to establish new sorts of connections to patients, to each other and to COs. Each of these is considered in turn before turning to activities undertaken by Comparison Practices in the next section.

3.3.1 Connecting patients with the Programme

All seven Intervention Practices developed bespoke methods for referring patients to the CLP. Some used the EMIS practice patient record system, others handwritten notes, one used on-the-spot referrals (whereby the GP introduces and refers the patient to the CLP personally), others adapted existing practice templates. Some combined these methods. The main point is that the referral systems were developed over time by practice staff themselves, and thus were able to fit into practice routines. Because of particular practice interests, one practice specifically targeted housebound patients and another targeted younger women.

Connecting CLPs to patients seemed to be easy. When asked, most patients found CLPs to be very approachable:

‘[the CLP] felt kinda easier to talk tae than the other social workers that I’d spoke tae previously about, about [CHILD’S NAME]….It’s more, more a friendlier approach. And as if [the CLP] was actually interested in you. Whereas the social workers that we’ve dealt with before it was, as quick as they can get you signed off they’re out the door.’

Patient 1, in-depth interview

Some patients reported being able to open up to CLPs:

‘They’re easy to talk tae. I can open up. I feel as if I can open up to [CLP name]. I have opened up to [CLP name], do you know what I mean? That’s how …
sent me for the counselling thing. [CLP] … got the ball rolling for that. But, unfortunately there's a long waiting list.’

Patient 2, in-depth interview

Opening up could lead to disclosure of traumatic events, such as childhood trauma, often experienced in the context of complex health problems. Thus, CLPs reported trying to help people with multiple complex problems, which often involved quite intensive work. One CLP provided the example of a person with ten long-term conditions, who was taking about thirty different medications, as well as multiple social problems. The CLP explained that the only way to work with this person was to focus on the most immediate matters before moving on to more complex ones.

One CLP reported being pleased at being able to help a particularly challenging patient group, in this case older men with addiction to alcohol, for whom few local services were available. The CLP reported that some of these men had started to engage with support after a long history of disengagement. When prompted about the likely cause for the reengagement:

‘I think it was the time given to them, it was the listening to them, empathising with their situation and being openly honest with them, but also being persistent and letting them know “no, I’m not going away, I’m going to be here to support you”.

CLP 4, Fully Integrated Practice, end of implementation interview

As described in section 3.2.1, patients interviewed had different experiences of engaging with COs. Some, like Patient 1 reported in section 3.2.1, said they enjoyed attending the referred service and found it beneficial. Others, like Patient 10 in the same section, did not and disengaged.

Others said that talking to the CLP was enough and the conversation encouraged them to make contact with community resources themselves:

‘You know, after me speaking to [CLP], and I heard nothing. So I thought to myself, ‘well, maybe [CLP]’s busy’ you know, the first thing you think doctors, nowadays, are very busy, you know? So I thought ‘well I’ll go to [shopping centre], myself.’

Patient 8, in-depth interview

Monitoring patient engagement with COs appeared more challenging, and no practice had a system that was integrated into routine practice systems. Instead, monitoring and following-up was done by the CLPs using their own bespoke databases or other systems, accessible only to themselves:

‘I’ve got my own spreadsheet, another spreadsheet, which I have to have because that's where the CHI number is, the actual person's name, the date of referral, who referred them, a little brief description of the reasons, whether they've been seen, whether it's arranged, you know?’

CLP 6, Partially Integrated Practice, in-depth interview

3.3.2 Connecting staff within practices
As previously described, the Links Worker model of social prescribing requires new ways of working for all practice staff. In particular, it requires new ways of working together and connecting as a practice team to implement the practice- and community-level activities detailed in the theory of change. As shown in section 3.2, Partially Integrated Practices seemed less able to embed new ways of working into their everyday practice routines. Whilst they could work out systems through which CLPs and GPs could work one-to-one with patients, the more ‘out of the ordinary’ practice-level activities and being proactive with community development was more difficult. This section describes the use of NPT\textsuperscript{22,23} to try to explore the variation between Partially and Fully Integrated Practices.

NPT theorists argue that four sorts of things that people do are important for understanding whether and how a new innovation like the Links Worker Programme can be easily implemented and embedded. The four things that people do are:

- work to make sense of the programme for themselves and others.
- work to maintain their own and others’ engagement with the innovation and the things that need to be done to make it ‘stick’.
- work that needs to be done collectively to make it happen.
- work that needs to be done to know whether it is working and what to do if it is not.

Thematic and cross-case analysis showed that these four features differed between Partially Integrated and Fully Integrated Practices (Figure 6).

**Figure 6. Work of Maintaining Connections Amongst Practice Staff in Partially Integrated and Fully Integrated Practices**

<table>
<thead>
<tr>
<th>Main areas of work in implementation</th>
<th>Partially Integrated Practices (Number = 4)</th>
<th>Fully Integrated Practices (Number = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How staff make sense of the Programme</td>
<td>Core leadership (GP, CLP, PM) do not share understanding</td>
<td>Core leadership (GP, CLP, PM) share understanding</td>
</tr>
<tr>
<td>How staff engage with each other</td>
<td>Less staff engagement in formal settings (meetings, shared learning activities) and more in informal settings</td>
<td>Staff engage in both formal and informal settings</td>
</tr>
<tr>
<td>What staff do</td>
<td>CLP's role in practice development constrained; more focus on one-to-one patient support than other activities</td>
<td>CLP’s role in practice development unconstrained and work balanced across patient support, practice development, and community networking</td>
</tr>
<tr>
<td>How the Programme is monitored and followed-up</td>
<td>No formal system other than practice meetings; informally</td>
<td></td>
</tr>
</tbody>
</table>

It became apparent, in individual interviews conducted during and at the end of the evaluation, that the core leadership involved in implementing the Programme (specifically, the lead GP, CLP and PM) did not share an understanding of what the Programme was or should be in Partially Integrated Practices.
For example, in one practice where another innovation was being delivered, the lead GP saw the Links Worker Programme together with the other project as part of an overall framework:

‘I think that the Links Programme and the [other innovation] together should be integral to every Deep End practice. I think it’s an ideal way of working. When we discussed this at the Deep End Conference, the feedback from, from colleagues, was ‘yeah, we would take [other innovation] and Links, the combination together.’ So the combination of the Links Worker Programme, the additional GP capacity [the activities of the other innovation], it's tailor made for Deep End practices.’

GP 6, Partially Integrated Practice, end-of-evaluation interview

In contrast, the CLP in this practice felt that GP focussed too much on the other innovation and not enough on the Links Programme. This CLP also suggested that the lead GP focused only on one aspect of the Links approach – the ability to refer to a CLP – which made the CLP feel that other aspects such as practice development and community networking were not valued:

‘…it’s [networking] more, a lot of it’s reactive, you’re finding resources based on a discussion with somebody than actually kind of going out. I’m still able to do that but what, when you’re taking it to the practice, what they’re saying is, “You just tell us about these places.” You know and, “We don’t need to make the referrals.”

CLP 2, Partially Integrated Practice, in-depth interview

In another Partially Integrated Practice, the CLP was explicit that there was not shared understanding of the Programme:

‘It’s taken our district nurse a year to understand what it is I do, and we still sometimes clash on approach and understandings and what that's about. So, you know, but it’s taken [the district nurse] a year to get to grips. [the district nurse] spent the first year telling everybody I was a psychologist, do you know what I mean?’

CLP 6, Partially Integrated Practice, in-depth interview

In Fully Integrated Practices, however, understanding was shared. For example in one Fully Integrated Practice, the GP and CLP shared the understanding that the Programme was different from other interventions:

‘… [CLP] has a much wider remit [than volunteer counsellors that they’ve used in the past], plus [the CLP] will actually take patients to appointments as well, which is often what these people need, they need somebody who’s hands-on, who will take them places, you know…’

GP 8, Fully Integrated Practice, in-depth interview

‘I think it was envisaged that it would be easier for people to come in and see us, see us for a certain amount of time, and then engage the service. And I think people come in, you realise that there’s, like, so many complex needs, so many issues that need support, and they’re all affecting their health. They’re all affecting their health. So it’s a longer intervention, it's more intense intervention.’

CLP 5, Fully Integrated Practice, in-depth interview
Although staff in both types of practices reported being able to engage with each other about Links Programme informally (for example, in the coffee room), formal opportunities were less apparent in Partially Integrated Practices. In contrast, staff in Fully Integrated Practices appeared to engage regularly both formally, in practice meetings, as well as informally. No staff interviewed from Fully Integrated Practices mentioned a lack of access to, or opportunities at, meetings or other formally organised shared learning activities to perform their roles and with engage with others in the Programme.

As described in section 3.2.2, the CLPs’ role in Partially Integrated Practices was focused mainly on one-to-one patient support and was said to be more constrained and uneven in relation to practice- and community-level activities. Thus CLPs’ descriptions of the actual work they did across a week or month differed. Although all CLPs reported a lot of one-to-one support for patients, only those in Fully Integrated Practices were able to fully connect others in their practice with the Programme.

For example, one CLP described work to explain the Programme to locums:

‘the other piece of work I’m doing is with locums, I want them to know about this Programme so that when they go to other practices they’re taking their learning with them as well. So we had a locum for four or five months, who left last week. So when I’d said “cheerio” on the last day she says, “Do you know [name of CLP], I didn’t learn anything medically while I was here,” she said, “but I certainly learned a lot from you and I’m going to take that practice with me.” So I… yes! That’s what I’m looking for…

CLP4, Fully Integrated Practice, in-depth interview

Perhaps because the Programme as a whole was monitored by the Alliance, no practice staff talked about formal monitoring of practice activities or of how connections were between staff. However, informal monitoring did appear to take place. For example, in one Partially Integrated Practice, the PM had not initially been involved much in the Programme. As the Programme developed, she became more aware of needing to be more involved and was keen to be involved in practice meetings:

[The Practice Manager] identified … that maybe [she] needs to come [to meetings], and […] I’ve said fortnightly Tuesday morning meetings, twenty minutes… because we’re less talking about patients now in those and more talking about, you know, sorting out processes and management and stuff like that [so the PM should be there].

GP 5, Partially Integrated Practice, in-depth interview

This is an example of changes implemented in response to informal monitoring. In another Partially Integrated Practice, the CLP who had felt unable to do many practice development activities was asked to contribute to a practice development plan. This made this CLP optimistic about the ongoing development of this aspect of the CLP role (CLP 2, Partially Integrated Practice, 2nd questionnaire) and does suggest that some Partially Integrated Practices may be able to develop into Fully Integrated Practices in time.
3.3.3 Connections with community organisations

As described previously although forming connections with COs was done in all Intervention Practices, it was more likely to be done pro-actively and routinely in Fully Integrated Practices.

The sub-project study of perspectives of staff in COs on the Links Worker Programme\(^43\) showed that individual professional relationships were critical to the connections made. Staff turnover, which can be common in small COs with insecure funding, could jeopardise these relationships:

‘Sometimes you can have a really good relationship with an organisation, and then a worker leaves and it completely changes the dynamic. You know, you’ve built up a relationship with one person, you feel like you’ve a good sense of each other, each other's roles, and then somebody moves on and that’s lost. And the nature of the third sector is that that’s continuous often.’
CLP 6, interview \(^43\)

The sub-project also showed that the CLPs played an important and specific role in sharing knowledge of how primary care works with staff in COs. This could be critical to really cementing relationships:

‘So the warmth is coming from the relationships that the community links practitioner is able to develop because she’s there in a position to actually understand the dynamics of a surgery, which are really full-on. I mean, it’s high pressure. But the Community Links Practitioner is in there to get an understanding of the inside workings and also the external needs. And bring them together.’
CO Worker 1, interview \(^43\)

Thus, through personal connections and sharing knowledge the CLP was key to forging working partnerships.

However, Smith and Skivington \(^43\) reported three main challenges to developing relationships between practices and COs. First, CLPs were concerned about the capacity of COs, in the context of austerity and less funding being available, to deal with increasing numbers of patient referrals. Second, CLPs reported some difficulty in finding referral routes to services offered by larger COs. Third, staff in COs were concerned that the CLP role might not be sustained if funding were cut, and that the effort they had put into developing relationships would be wasted. These are clearly important considerations to be made in planning integrated care and provision of care.

3.3.4 Summary of how Intervention Practices established and maintained connections

- Bespoke systems for referring patients to the CLP were developed and well-established in all practices.
- Patients found interacting with CLPs easy, and CLPs worked flexibly with people with a range of problems.
Patients interviewed engaged variously with COs, some reported excellent and some less good experiences.

It seemed more difficult in Partially than in Fully Integrated Practices to forge new ways of connecting between staff.

Compared to staff in Fully Integrated Practices, those in Partially Integrated Practices did not appear to share understanding of the Programme and had fewer opportunities to interact formally about the project.

Staff in Fully Integrated Practices were able to work across patient, practice and community-levels whereas those in Partially Integrated Practices work seemed more constrained.

There were no formal monitoring systems for practice level engagement but informal monitoring (seeing ‘how things were going’) was evidenced by examples of changes made as implementation of the Programme developed.

The development of close individual relationships between CLPs and staff in COs was seen as both a strength and a weakness of the Programme: a strength in that services for patients could be implemented and referrals were reported as more appropriate but a weakness in that relationships between organisations could be difficult to sustain with staff turnover.

The ongoing challenges of austerity, with lack of available funding and high staff turnover in small COs, was seen a major threat to developing sustained relationships with COs by CLPs.
3.4 Links-like Activities in Comparison Practices

Although, most Comparison Practices did not implement any Links-like activities (see section 3.2.6), it was clear, from early focus group discussions and subsequent email surveys, that they understood the Programme:

GP: ‘I think it’s about, it’s about linking up individual patients with practice resources. And also with community resources in a way that would possibly impact on health, both physical- physical and mental, physical and emotional.’
PM: ‘I would agree, yeah. I would agree, yeah. Using the resources within the community and trying to tie up resources that are already there and that patients can use that maybe don’t know- that they don’t know about.’

GP 9 and PM 5, Comparison Practice, focus group discussion

As detailed in section 3.2.6, two practices did implement some elements of a links-like approach. For example, one described ‘open door policy’ for COs. But further implementation of Links-like activities was hindered by lack of time in the face of high demand:

‘I think one of the issues for us at the moment is just the volume of business. That it’s very difficult in the stuff that, you know, where you’re just trying to basically get people in to a slot, as it were. It’s quite difficult to sometimes take that time to actually have that conversation that says “well actually, what you should do is go and, you know, and speak to this organisation whom I think would be helpful, and fine so.” So we do – and, of course, in the waiting area we do have lots of posters…’

GP 11, Comparison Practice, focus group discussion

For one Comparison Practice, which had carried out a few ‘Links-like’ activities, this appeared to be done at increasing cost:

Please tell us which areas, what kind of things you have been doing, and how you have managed to resource it?
Resource: ‘no additional funding, less profit for GPs as self-funded
Have your expectations of these activities changed over time?
- I had to cut standards as lack of locum cover put too much strain on the system, e.g. sometimes I do less social prescribing due to pressure on appointments and lack of time for each patient’

GP 7, 2nd email questionnaire

3.4.1 Summary of Links-like activity in Comparison Practices

- All Comparison Practices seemed to understand the Links Worker Programme and Links-like activities.

- Some did limited amount of signposting but increasing demand and lack of time meant that very little could be done as resources were focussed on delivering routine general practice services.
3.5 Perceptions of Sustainability

Sustainability of the Programme was in the minds of all staff respondents throughout; they spoke about it in focus group discussion and in end of evaluation interviews. Practice staff are well used to pilot projects or innovations that last 1, 2 or 3 years and clearly hoped this Programme would be supported in the long term.

Despite being a relatively well-resourced Programme, the GP in at least one Fully Integrated practice said that the practice had already contributed some of its own funds to implement the Programme. The lead GP in this practice described plans to make practice-level activities continue beyond the funding period:

‘We’ve had conversations about how we would continue to have them [protected learning times], or how we’d find the money to have them if we were to lose the development grant which… So I think that’s become something that we’ve taken ownership of and feel is integral to our kinda sustainability as a practice. Likewise, with the yoga, attendance at that varies. The GPs are more regular attenders than the receptionists. So there’s one or two receptionists that come regularly but not all of them. We are having some conversations about how we could make it a bit more inclusive’

GP 1, Fully Integrated Practice, end-of-evaluation interview

Part of the plans discussed involved more of the practice staff developing a greater sense of “ownership” of the practice-level Programme activities, planning ahead, and being more inclusive, especially for non-clinical administrative staff. However, respondents were clear that practices may have to make a permanent financial investment:

‘We would probably try to find a means to keep a Links receptionist’s role. Pretty sure that would carry on. Even if we have to fund that ourselves. We wouldn’t be able to afford to continue funding a Links Worker role without additional resource.’

GP 1, Fully Integrated Practice, end-of-evaluation interview

Leadership was seen as a resource that needed to be sustainable and not over-reliant on one individual:

‘I still feel that a lot of it relies on my energy to run. And that’s fine, I feel like I’ve got the energy. And, but it, I guess it, I feel it’s also dangerous in the sense that it’s not a sustainable model if it’s individual driven. And I think it would be difficult to say this could be reproduced in other practices that won’t necessarily have someone who’s got that kind of personal sense of, you know, drive for this thing.’

GP 1, Fully Integrated Practice, in-depth interview

The role of the full-time and embedded CLP was seen as critical. One GP believed that some aspects of the Programme may continue for a while but as time passes, in the absence of a CLP, information and relationships would become outdated and cease:
'Well, the changes we've made... The links we've made with existing organisations. The problem being, you make those links and then those organisations stop functioning, for whatever reason. Some of them do, some of them don't. You know? So that... that will slowly peter out, you know? Because we'll slowly find that different organisations aren’t – and we won’t be able to really find out so much about new organisations. That'll be the problem... So we would run at quite well for a bit, probably signposting ourselves. ’

GP 5, Partially Integrated Practice, end-of-evaluation interview

One CLP did not think it possible for the practice to become a Links Practice without a Links Worker:

‘I think you need a Links Worker because the... Having up to date information constantly, around community resources that you refer into, is a massive... And also the complex nature of... Or the complex issues that the people face cannot be solved overnight. And sometimes you need kind of more intensive work. You need to work with them for over...’

CLP 5, Fully Integrated Practice, end-of-evaluation interview

The other essential resource identified across practices was time, both to deliver Links-like activities but also to allow time for cultural change:

‘I don't think it would take that much money. It’d be about the time, really. And we’ve already freed up time because we’ve got the patient check-in. So the staff don’t have the same contact with patients. Now, I didn’t reduce staff hours or anything. I’ve kept that in hand, think to myself, if there comes a time when the Links project goes, I can say well, we’ve got at least three or four hours a week there that we could send people out to the local services. ’

PM 7, Partially Integrated Practice, end-of-evaluation interview

‘Introducing ideas and then allowing them to slowly seep through and seep in. And it’s... about having a strategy for achieving this, to embed a culture. You know? And... I don’t think I’ve embedded a culture in six months.’

CLP 3, Fully Integrated Practice, end-of-evaluation interview

As already seen in section 3.2.4, practice development activities were facilitated by the Practice Development Fund which bought both clinical and administrative time. Time is needed for activities which, in turn, may slowly develop the change in culture discussed by the CLPs.

However, ultimately, the long term sustainability of the programme was believed to ride on wider policy issues:

‘I think a lot of it hinges on what happens with the new GP contract. I think the Programme is very much within the philosophy of what both the BMA and the Government have said is their aspiration for the GP contract.’

GP 1, Fully Integrated Practice, in-depth interview
3.5.1 Summary of perceptions of sustainability

- Financial resources, time, leadership and CLP support were all seen as essential for the continuation of the Programme.

3.6 Experiences of the Programme

How the Programme was experienced, both by staff and patients, is important in understanding outcomes which are presented in the next chapter. The research team were asked to consider perceptions of the strengths and weaknesses of the programme, perceptions of outcomes, and perceived characteristics of those most and least likely to benefit from the programme. Each of these is considered in turn.

3.6.1 Perceived strengths and weaknesses of the Programme

The Deep End Group suggested that general practice is the ideal place to offer an intervention like the Links Worker Programme because of frequent contact with people with complex problems, population coverage, continuity, flexibility, long term relationships, and substantial knowledge, experience and trust of patients. This view was echoed in early focus group discussions in many practices. For example:

‘that kudos, the respect and trust that GP practices have in the community to help to do that [address the non-medical issues of patients], and it’s about kind of bringing in a kind of community approach to primary care.’
CLP7, Partially Integrated Practice, focus group discussion

Patients, on the other hand, offered contrasting views on where best to offer the ‘Links-approach’. For example, some patients suggested that general practice may not be the only place suited to offer the Programme:

Interviewer: ‘Do you think seeing someone like [CLP] in a general practice is the best place, or do you think that, you know, you could perhaps access the service in, I don’t know, a library or some other such…?’

‘Oh God, that would be great if it was, I mean, it’s good.’

Interviewer: ‘Do you think so?’

‘Yeah, I do, because there’s people who won’t even go to the doctor, you know. … people sometimes are intimidated by even going to doctors or talking about, you know, anybody official.’
Patient 4, in-depth interview

‘if it’s something that the Carer Centre would think you would need then that would be good as well for them to be able to offer it, because they’re also an information place. So aye, the Carers Centre would be good as well. I suppose.’
Patient 1, in-depth interview

On the other hand, another patient thought that the general practice was the ideal place to offer this kind of programme:
'No, I think the GP surgery's fine because —'

Interviewer: ‘Why?’

‘Because it's – because if you were just going to the library to get that, everybody would know. Do you know what I mean?’

Patient 5, in-depth interview

For Patient 5, the privacy afforded in a general practice environment was valued over other more public places.

A few practices used practice development funds to purchase patient self ‘check-in’ machines. As reported in the interim report, staff said they expected it to alleviate pressure on receptionists, and free up their time to better support patients as well as assist in other Links-related activities. Staff subsequently reported it to have been useful. For example, one CLP in a Partially Integrated Practice said that the self-check-in machine did help to take “stress off some of the staff at the front desk” and in the end-of-evaluation interview, the lead GP in this practice also said that the waiting room is definitely less stressful now.

However, self check-in was not necessarily viewed positively by some patients:

‘...the self-check-in ..., that’s made the surgery go completely downhill.’

Interviewer: ‘How so?’

‘Because the desk staff talk to you as if you’re wasting their time, “Go check in over there”. Or you could phone in your appointments to an automated phone line, phone in your prescriptions. And they're just not very, they don't seem to do a good job, in my opinion.’

Patient 1, in-depth interview

3.6.2 Perceived outcomes of the Programme

Analysis of patient experiences in relation to short and medium term outcomes was presented in section 3.2.1. It suggested that the theory of change was working as expected to improve some patients’ ability to find help oneself, to self-manage problems and to feel valued. However, this experience was not universal; some patients did not find the CLP or CO useful at all.

The interviewed patients reported positive experiences relating to the theory of change’s medium term outcome, ‘improved relationships with professionals and a sense of being seen and valued as a ‘whole person’. One patient thought the support provided by the CLP was better than support previously provided by counsellors:

Interviewer: ‘Okay. Do you think that you’ve managed to get the support that you needed from the surgery?’

‘Yes, because it's just me the way I am. Know how? It’s, my depression’s my depression [upset]. To me counsellors don’t do anything for me.’

Patient 6, in-depth interview
Unlike counsellors, where there is often a limit to how many times a patient can see them, this patient felt that the CLP was there if support was needed again. Another patient echoed this view:

‘We’ve sometimes left better feeling like that than what we have coming oot fae a counsellor. An’ I know that must be something that she does. I don’t know if it’s just the whole thing her working wi’ families, individuals, an’ it’s building up the relationship wi’ the doctors an’ the patients an’ stuff like that an’ knowing, like, as I say’
Patient 9, in-depth interview

There was something about the un-conditionality and continuity of support from CLPs that was valued by patients. One-to-one support to link patients to COs was seen as important in the Programme’s theory of change, but the very in-depth work over a long period of time on a range of complex issues was not articulated as a clear part of CLP’s work in the early stages of the evaluation. There is the sense, from both patient and CLPs interviews, that much of the work actually involves one-to-one support over a period of time rather than simply linking patients to community resources. This could be paraphrased as ‘fixing not linking’ or ‘fixing as well as linking’ and is an important learning point for the Programme in the future.

Some GPs recognised that the one-to-one support was important but were realistic about what outcomes could be achieved for patients with such complex problems. For example, one GP did not think that anyone is going to be ‘cured’, but recognised other outcomes:

‘What I’ve got is a whole set of patients who are putting now more than a toe in the water of the concept of engagement. And they’re actually… they actually are understanding that they really do need to get on an engage, and their problems are actually situated in the psycho-social model, and the solutions are in the psycho-social model [meaning that solutions are not medical] rather than me just somehow magically dreaming up some kind of medication for them.’
GP 8, Fully Integrated Practice, end-of-evaluation interview

Increasing engagement in health issues by patients was observed by other GPs, with one impressed by the extent to which some patients were willing to take social prescribing on-board:

‘I’m also impressed by the fact that people will come in with some problem and we work through it and I say ‘well, have you thought about this or…?’ And it seems a bit kind of unusual to maybe suggest something, but they get it, they understand, and they say ‘yeah, no, that does sound interesting and it…’ they’re not stuck in a medical model, which is quite interesting – ‘cause I thought people would kind of say ‘well, you’re a doctor. I’m expecting you to.’
GP 2, Fully Integrated Practice, in-depth interview

Another GP recognised the value of the one-to-one work the CLP did with patients saying that the CLP may have:

‘have empowered people... to engage with medical interventions that they wouldn’t normally engage with’
CLPs also reported being able to make a real difference in some practices, for example, reducing frequent attendance:

‘The fact that [...] – they were coming to the doctors once every week and now they're coming to see me every, once a week. I probably did that for like a month until we identified the exact, you know, the right services for them. But now the majority of them will have dispersed off and been accessing all the different services [and not coming to the practice]’
CLP 5, Fully Integrated Practice, end-of-evaluation interview

Although another CLP suggested that it takes time to develop relationships because of people’s complex problems which did not reduce attendance but is worthwhile:

‘it took time, you know, to build up that relationship with the individual, but you can see just the difference it's made, you know, he knows I'm there and you know I guess it's like chiselling away, each time that I see him, you know, he'll tell me something else’
CLP 8, Partially Integrated Practice, end-of-evaluation Interview

Although the pressure on GPs remained high, they felt more able to cope in the way that they prefer, so better support their patients:

‘You know, because obviously it’s very, very busy. Lots of calls on your time. But… that feeling of being swamped is probably less because you can think of some solutions on an individual patient basis. So for instance, someone with dementia, isn’t just a dementia diagnosis. It’s more, “Here are things that might help you or help your family.” Maybe link in with Alzheimer Scotland or considering power of attorney, or these sorts of things or carers or you know, what exactly, where to find things to help...’
GP 2, Fully Integrated Practice, end-of-evaluation interview

This lightening of pressure for one GP in a Fully Integrated Practice had even turned into a source of satisfaction:

‘So I think it’s given me some, some more satisfaction, trying to be able to actually bring up things that really matter rather than just dealing with the symptoms. So that’s in kinda consultations. It’s hard to measure how big an impact that is but… it certainly feels like it’s an impact.’
GP 1, Fully Integrated Practice, end-of-evaluation interview

A GP in a Partially Integrated Practice, which had been without a CLP for a long time, was pleased that the practice had been able to make use of Programme resources to enable a PN to focus on housebound patients. Speaking about the difficulties of implementing the Programme in the absence of the CLP:

In fact, our Practice Nurse is actually going to start to do some as well you know for housebound patients with chronic, you know, well, most of them have got chronic illness, you know? Like, we've got a very high rate of COPD patients and, you know, a few of them are housebound so they've not really had any, you know, they've not had… it's difficult to do all their, you know, their
monitoring. And she's going to start to go out and see, you know, some of them. Well, she has already, in fact.

GP 3, Partially Integrated Practice, in-depth interview

3.6.3 Characteristics of those most/less likely to benefit

Whether, and which, patients benefitted from being referred to a CLP is addressed in the outcome evaluation, section 4.5. It was clear, throughout the data, that staff in practices identified ‘typical links-patients’ as those with multiple, complex, medical and social problems:

Lots of people just need their doctor to do medical work because the rest is taken care of. But there’s two groups of people that don’t fit the NHS or social care particularly well and that’s people in deprived areas and very elderly, they have complex needs but often their social needs is the biggest factor of their health and we treat them with, you know, anti-depressants or with aspirin or blood pressure treatment when actually it’s loneliness or inactivity or money worries or domestic violence or a whole host of things.

GP 1, Fully Integrated Practice, end-of-evaluation interview

CLPs also described their work as immensely varied, dealing with people with multiple complex problems, and often intense:

I can spend a day doing really, really intense palliative care work alongside a GP for an individual who will not engage with services at all. The person I saw had curative cancer, now palliative, just cannot engage. And, you know, we are, with GPs coming in before … shift starts, we’re the one with the keys, we’re at the house desperately trying to support an individual to die well and that's the start of the day, and then we have three appointments back-to-back with individuals, first time disclosures, some positive stuff, some hopeful stuff within that

CLP 6, Partially Integrated Practice, in-depth interview

No respondents identified any particular group of people who would be more, or less, likely to benefit from CLP support.

3.6.4 Summary: experiences of the Programme

• Basing the Programme in general practice was seen as a key strength by the Deep End Group and this view was echoed by staff taking part in this evaluation.

• Some patients agreed; they liked the practice setting at least partly because it was seen as confidential. Others thought that other community settings, like a local library, might be even better for people who rarely consulted a GP.

• Self check-in machines were highly valued by practice staff, largely because they freed up reception staff time, reduced staff stress and potentially increased reception staff ability to interact with patients. Some patients had different
views, seeing the self check-in as an example of deterioration in personalised care from general practice.

• Some patients felt more able to access support and manage their conditions (section 3.2.1) although others did not experience these benefits. Patients also valued un-conditionality, feelings of being listened to and able to come back whenever they felt the need.

• CLPs reported spending considerable time with people with very complex problems.

• All staff interviewed agreed that ‘typical links-patients’ as those with multiple, complex, medical and social problems. However, staff did not identify any particular group more or less likely to benefit.
4. Effectiveness of the Links Worker Programme

Chapter 4 presents the results of the outcome evaluation designed to address aim 3 in the evaluation brief, which was to assess the effectiveness of the Links Worker Programme in achieving the intended outcomes at patient, practice and community levels.

Section 4.1 reports the findings from the staff survey.

Section 4.2 describes the sample of patients who were referred to the CLP (intervention patient denominator), the characteristics of the patients who then took part in the evaluation (intervention patient numerator), and the findings on patient outcomes at follow-up (nine months after baseline). The full statistical analysis outputs can be found in Appendix 21.

4.1 Findings from the Survey of Staff

4.1.1 Achieved staff sample

At time-point 1 (starting in March 2015, 11 months after the Links Worker Programme started), 82 of the 111 staff in Intervention Practices (74%) and 56 of the 108 staff in Comparison Practices (52%) returned a completed questionnaire (Table 3).

At time point 2 (9 months later when there was a slight increase in the denominator in both types of practices), 79 of the 113 staff in Intervention Practices (70%) and 43 of the 109 staff in Comparison Practices (39%) completed follow-up questionnaire. The characteristics of respondents and non-respondents at either time points could not be compared as the research team did not have access to this information.

Table 3. Achieved Samples at Data Collection Time-Points 1 and 2 for Intervention Practices and Comparison Practices (%)

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>Time-Point 1</th>
<th>Time-Point 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Staff Denominator</td>
<td>Overall Achieved Staff Sample</td>
</tr>
<tr>
<td>Intervention</td>
<td>111</td>
<td>82 (74%)</td>
</tr>
<tr>
<td>Comparison</td>
<td>108</td>
<td>56 (52%)</td>
</tr>
<tr>
<td>Total</td>
<td>219</td>
<td>138 (63%)</td>
</tr>
</tbody>
</table>

No significant differences were found between Intervention Practices and Comparison Practice staff at either data collection time-points in relation to age, gender and number of years in practice (more detailed breakdown of respondents characteristics are listed in Tables 6.1.1 and 6.2.1, Appendix 21).
### 4.1.2 Comparison of findings from staff survey between Intervention and Comparison Practices

Table 4 summarises staff roles and work patterns (hours worked per week) of respondents at time-point 1 and shows that there were no significant differences between Intervention Practices and Comparison Practices. There were also no differences in staff respondent characteristics at follow-up at time-point 2 (Tables 6.1.1 and 6.2.1, Appendix 21).

**Table 4. Achieved Staff Sample Characteristics at Time-Point 1 (%)**

<table>
<thead>
<tr>
<th>Role in the Practice</th>
<th>All</th>
<th>Comparison Practice Staff</th>
<th>Intervention Practice Staff</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (N Missing)</td>
<td>138 (0)</td>
<td>68 (0)</td>
<td>70 (0)</td>
<td></td>
</tr>
<tr>
<td>N (%) GP</td>
<td>51 (37.0%)</td>
<td>25 (36.8%)</td>
<td>26 (37.1%)</td>
<td>0.444F</td>
</tr>
<tr>
<td>N (%) Practice nurse</td>
<td>18 (13.0%)</td>
<td>7 (10.3%)</td>
<td>11 (15.7%)</td>
<td></td>
</tr>
<tr>
<td>N (%) Receptionist/Support staff</td>
<td>39 (28.3%)</td>
<td>17 (25.0%)</td>
<td>22 (31.4%)</td>
<td></td>
</tr>
<tr>
<td>N (%) Health care assistant</td>
<td>4 (2.9%)</td>
<td>2 (2.9%)</td>
<td>2 (2.9%)</td>
<td></td>
</tr>
<tr>
<td>N (%) Practice manager</td>
<td>14 (10.1%)</td>
<td>8 (11.8%)</td>
<td>6 (8.6%)</td>
<td></td>
</tr>
<tr>
<td>N (%) CLP</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td></td>
</tr>
<tr>
<td>N (%) Other</td>
<td>12 (8.7%)</td>
<td>9 (13.2%)</td>
<td>3 (4.3%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employed (hours per week)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N (N Missing)</td>
<td>121 (17)</td>
<td>61 (7)</td>
<td>60 (10)</td>
<td></td>
</tr>
<tr>
<td>Mean (sd)</td>
<td>30 (10)</td>
<td>31 (8)</td>
<td>30 (11)</td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>32 (24, 38)</td>
<td>34 (24, 38)</td>
<td>28 (23, 36)</td>
<td></td>
</tr>
<tr>
<td>Minimum, Maximum</td>
<td>4, 80</td>
<td>4, 42</td>
<td>8, 80</td>
<td></td>
</tr>
</tbody>
</table>

*M: Mann-Whitney-Wilcoxon Test  
F: Fisher’s exact Test*

Intervention Practice staff were more likely than Comparison Practice staff to report participation in team activities aimed at improving staff wellbeing (82% c.f. 25% respectively, p<0.001) at time-point 1 (11 months after the start of the Links Worker Programme) and at time-point 2, nine months later (70% c.f. 31% respectively, p<0.001) (Figure 7).

There were no significant differences between Intervention Practices and Comparison Practices at either time-points in relation to job satisfaction, burn-out, and morale (Tables 6.1.2 and 6.2.2, Appendix 21). There were also no significant differences between the Intervention Practices and Comparison Practices for the different components of team climate (Figure 8 below) except for ‘participation’, which was significantly higher in the comparison than in the intervention group at time-point 1 (p=0.007) though the size of the difference was very small (Tables 6.1.3 and 6.2.3, Appendix 21).
Figure 7. Participation in Team Activities in Intervention Practices and Comparison Practices at Time-Points 1 and 2 (%)

Figure 8. Team Climate Scores in Intervention Practices and Comparison Practices at Time-Points 1 and 2 (mean)
4.1.3 Comparison of findings from staff survey in Fully Integrated and Partially Integrated Intervention Practices

There were no differences between Fully Integrated and Partially Integrated Practices in terms of distribution of different staff roles, mean staff age or gender. In terms of participation in team activities aimed at improving staff wellbeing, there was no significant difference between Fully Integrated and Partially Integrated Practices at time-point 1 (87% c.f. 78% respectively, \( p = 0.523 \)). However at time-point 2, participation was reported to be significantly higher in the Fully Integrated Practices compared with the Partially Integrated (87% c.f. 54% respectively, \( p = 0.007 \)) (Figure 9).

**Figure 9.** Participation in Practice Team Activities to Improve Staff Wellbeing in Fully Integrated and Partially Integrated Practices at Time-Points 1 and 2 (% answering ‘yes’)

Differences were apparent between the Partially Integrated Practices and the Fully Integrated Practices in the intervention group at time-point 1 in job satisfaction (\( p=0.036 \)) and the team climate items ‘participation’ (\( p=0.007 \)), and ‘support for innovation’ (\( p=0.004 \)) which were higher in the Fully Integrated than the Partially Integrated. At time-point 2, team climate items ‘participation’ (\( p=0.001 \)), ‘support for innovation’ (\( p=0.039 \)) and ‘team objectives’ (\( p=0.032 \)) were higher in the Fully Integrated Practices than the Partially Integrated Practices (Table 5 and 6).

Staff in the Fully Integrated Practices reported less likelihood of giving up direct patient care in the next five years than staff in the Partially Integrated Practices at time-point 2 (\( p=0.049 \)) (Table 7.2.4, Appendix 21).
Table 5. Staff Team Climate Scores at Time-Point 1 in Fully Integrated Practices and Partially Integrated Practices (mean, median)

<table>
<thead>
<tr>
<th></th>
<th>All Practices</th>
<th>Fully Integrated Practices</th>
<th>Partly integrated Practices</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=15, Best possible score=105)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (N Missing)</td>
<td>66 (4)</td>
<td>30 (2)</td>
<td>36 (2)</td>
<td></td>
</tr>
<tr>
<td>Mean (sd)</td>
<td>85 (13)</td>
<td>88 (12)</td>
<td>82 (13)</td>
<td>p=0.036\textsuperscript{KW}</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>87 (77, 95)</td>
<td>91 (83, 96)</td>
<td>82 (76, 90)</td>
<td></td>
</tr>
<tr>
<td>Min , Max</td>
<td>40, 105</td>
<td>62, 105</td>
<td>40, 102</td>
<td></td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=6, Best possible score=30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (N Missing)</td>
<td>68 (2)</td>
<td>31 (1)</td>
<td>37 (1)</td>
<td></td>
</tr>
<tr>
<td>Mean (sd)</td>
<td>23 (4)</td>
<td>25 (4)</td>
<td>22 (4)</td>
<td>p=0.007\textsuperscript{M}</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>24 (21, 27)</td>
<td>25 (22, 29)</td>
<td>23 (20, 24)</td>
<td></td>
</tr>
<tr>
<td>Min , Max</td>
<td>14, 30</td>
<td>16, 30</td>
<td>14, 30</td>
<td></td>
</tr>
<tr>
<td><strong>Support for Innovation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=5, Best possible score=25)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (N Missing)</td>
<td>68 (2)</td>
<td>31 (1)</td>
<td>37 (1)</td>
<td></td>
</tr>
<tr>
<td>Mean (sd)</td>
<td>19 (3)</td>
<td>21 (3)</td>
<td>18 (4)</td>
<td>p=0.004\textsuperscript{M}</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>20 (18, 20)</td>
<td>20 (20, 21)</td>
<td>18 (15, 20)</td>
<td></td>
</tr>
<tr>
<td>Min , Max</td>
<td>10, 25</td>
<td>16, 25</td>
<td>10, 25</td>
<td></td>
</tr>
<tr>
<td><strong>Team Objectives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=4, Best possible score=28)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (N Missing)</td>
<td>68 (2)</td>
<td>31 (1)</td>
<td>37 (1)</td>
<td></td>
</tr>
<tr>
<td>Mean (sd)</td>
<td>21 (5)</td>
<td>22 (5)</td>
<td>20 (4)</td>
<td>p=0.184\textsuperscript{M}</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>22 (17, 25)</td>
<td>24 (18, 26)</td>
<td>20 (16, 24)</td>
<td></td>
</tr>
<tr>
<td>Min , Max</td>
<td>12, 28</td>
<td>13, 28</td>
<td>12, 28</td>
<td></td>
</tr>
<tr>
<td><strong>Task Orientation</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>(Poorest possible score=4, Best possible score=28)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (N Missing)</td>
<td>68 (2)</td>
<td>31 (1)</td>
<td>37 (1)</td>
<td></td>
</tr>
<tr>
<td>Mean (sd)</td>
<td>21 (4)</td>
<td>22 (4)</td>
<td>20 (5)</td>
<td>p=0.140\textsuperscript{M}</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>22 (18, 24)</td>
<td>22 (20, 24)</td>
<td>21 (18, 24)</td>
<td></td>
</tr>
<tr>
<td>Min , Max</td>
<td>9, 28</td>
<td>14, 28</td>
<td>9, 28</td>
<td></td>
</tr>
</tbody>
</table>

M: Mann-Whitney-Wilcoxon Test
F: Fisher's exact Test
KW: Kruskal-Wallis Test
Table 6. Staff Team Climate Scores at Time-Point 2 in Fully Integrated Practices and Partially Integrated Practices (mean, median)

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Fully integrated Practice Staff</th>
<th>Partially integrated Practice Staff</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (N Missing)</td>
<td>Mean (sd)</td>
<td>Median (IQR)</td>
<td>Min , Max</td>
</tr>
<tr>
<td><strong>Job Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=15, Best possible score=105)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>66 (1)</td>
<td>83 (18)</td>
<td>88 (75, 94)</td>
<td>15, 105</td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=6, Best possible score=30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>67 (0)</td>
<td>24 (5)</td>
<td>24 (22, 29)</td>
<td>6, 30</td>
</tr>
<tr>
<td><strong>Support for Innovation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=5, Best possible score=25)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>67 (0)</td>
<td>19 (4)</td>
<td>20 (17, 22)</td>
<td>5, 25</td>
</tr>
<tr>
<td><strong>Team Objectives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=4, Best possible score=28)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>67 (0)</td>
<td>22 (5)</td>
<td>22 (18, 25)</td>
<td>6, 28</td>
</tr>
<tr>
<td><strong>Task Orientation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Poorest possible score=4, Best possible score=28)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>67 (0)</td>
<td>22 (4)</td>
<td>22 (19, 24)</td>
<td>9, 28</td>
</tr>
</tbody>
</table>

M: Mann-Whitney-Wilcoxon Test  
F: Fisher's exact Test

Other than CLPs, practice staff knowledge of local community resources (‘very good/good’) tended to be lower in the Partially Integrated Practices than in the Fully Integrated Practices at both time points (time-point 1; 29% c.f. 61%, p=0.036 and time-point 2; 49% c.f. 75%, p=0.062, respectively). The figure had risen between the time periods in Partially Integrated Practices.
The reported number of community resources suggested to patients in the previous four weeks ('signposting' by staff other than CLP) was similar in both types of practices at time-point 1 with a mean of 10 (standard deviation (SD) 10) in the Partially Integrated Practices and a mean of 12 (SD 13) in the Fully Integrated Practices (p=0.937). However by time-point 2 there was a greater than two-fold difference in signposting rates between Partially Integrated Practices and Fully Integrated Practices, with means of 8 (SD 7) and 18 (SD 16), respectively (p=0.014). Full results are shown in Table 7.1.5 and Table 7.2.5 in Appendix 21.

4.1.4 Summary of the staff survey findings

• Similar numbers of staff questionnaires were returned at both time-points from Intervention Practices and Comparison Practices and staff characteristics (age, gender, staff role) did not differ between groups or data collection time-points.

• Staff in the Intervention Practices reported substantially higher participation in activities to promote staff wellbeing than those in the Comparison Practices at both time-points.

• There were no differences between Intervention Practices and Comparison Practices at either time-point for job satisfaction, burn-out, morale, and most team climate items.

• There were no differences between Fully Integrated Practices and Partially Integrated Practices for burn-out and morale. However, several aspects of team-climate were significantly higher in the Fully Integrated Practices compared with the Partially Integrated Practices at both time points. Job satisfaction was higher in the Fully Integrated Practices than in the Partially Integrated Practices at time-point 1, and staff in the Fully Integrated Practices reported less likelihood of giving up direct patient care in the next five years than staff in the Partially Integrated Practices at time-point 2.

• Participation in activities to promote staff wellbeing was significantly higher in the Fully Integrated Practices than in the Partially Integrated Practices at time-point 2.

• Practice staff knowledge of local community resources tended to be lower in the Partially Integrated Practices than in the Fully Integrated Practices and ‘signposting’ patients to local community resources by staff (other than CLPs) was reported to be substantially lower in Partially Integrated Practices than in Fully Integrated Practices by time-point 2.
4.2 Characteristics of Patients Referred to a CLP in Intervention Practices

There were 980 patients referred to a CLP during the study recruitment period (March 2015 – December 2015), here referred to as the intervention patient study denominator.

4.2.1 Deprivation

The majority of patients referred to a CLP (75%) lived in the 15% most deprived areas in Scotland, which was higher than the Intervention Practice populations as a whole (67% of registered patients in 15% most deprived areas) (Figure 10). As can be seen, referred patients were more deprived than the practice populations as a whole, with the exception of one practice.

Figure 10. Comparison of Deprivation Level of Patients Referred to a CLP with All Registered Patients by Practice (% of patients living in the 15% most deprived areas of Scotland)

Almost two-thirds (64%) of those referred to a CLP lived in the 10% most deprived areas in Scotland as measured by SIMD deciles, and over 80% lived in the 20% most deprived areas in Scotland as measured by SIMD quintiles (results not shown).

Deprivation level (% living in the 15% most deprived areas) of referred patients did not vary significantly between Fully Integrated Practices and Partially Integrated Practices (p=0.444).
4.2.2 Gender

Of patients referred to CLPs, 59% were female compared to 50% for the Practices as a whole (Figure 11). The gender balance of patients referred to the CLPs did not vary significantly by practice ($p=0.153$) nor between Fully Integrated practices and Partially Integrated Practices ($p=0.190$) (results not shown).

**Figure 11.** Comparison of Gender of Patients Referred to a CLP with All Registered Patients by Practice (% female)
4.2.3 Age

The mean age of patients referred to a CLP was 46 years. The distribution of patients referred to a CLP across age groups were similar to the age distribution for the total practice populations (Figure 12).

**Figure 12.** Comparison of Age Groups of Patients Referred to a CLP with All Registered Patients in All Intervention Practices Combined (%)

The age of patients referred to a CLP varied significantly by Practice (p<0.01; Figure 13).
There was also considerable variation in age distribution across the Intervention Practices for total Practice populations (Figure 14).

Patients referred to a CLP were significantly younger in the Fully Integrated Practices than Partially Integrated Practices (p<0.001; Figure 15).
4.2.4 Type of problems

Patients were classified as having physical health, mental health or social problems based on the referral information recorded in the CLP Access database (Appendix 22 for more detail on the classification system). This information was available for 734 of 980 referred patients (75%). Approximately one third of patients had problems that spanned at least 2 of the 3 domains (physical, mental, social) (Figure 16).

The number of individual problems recorded for each patient ranged from 1-6 (mean 2.0). There were no significant differences between those with 2 or less recorded problems and those with more than 2 recorded problems in terms of age (p=0.644), gender (p=0.962) or deprivation (p=0.976).

There was considerable variation between practices in the percentage of patients referred with more than 2 recorded problems (ranged from 12.1% to 34.9%). This was mainly due to higher number of recorded problems by 2 practices, which translated into a difference in proportion of patients with more than 2 recorded problems between Fully Integrated Practices and Partially Integrated Practices (26.2%. c.f. 17.5%, p=0.03).
4.2.5 Contact with CLPs

Overall, CLPs had contact with 81% of patients referred to them. No significant differences were found between patients who had contact with a CLP and those who did not in relation to patients’ gender (p=0.657), deprivation (p=0.70), number of recorded referral problems (p=0.796) or number of recorded referral problem domains (p=0.199). However, contacted patients were slightly older than those who did not have contact (mean age 47.2 years and 43.56 years, respectively; p=0.005).

There was considerable variation in the percentage of referred patients seen by a CLP across practices (ranged from 64.4% to 95.6%, p<0.001; Table 7), and between Fully Integrated and Partially Integrated Practices (88.6%. c.f. 73.7%, p<0.001; Table 8).
Table 7. Whether or Not Referred Patients had CLP Contact in relation to Individual Intervention Practices (n,%)  

<table>
<thead>
<tr>
<th>Practice</th>
<th>Number (%) of Referred Patients who had CLP Contact</th>
<th>Number (%) of Referred Patients who had No CLP Contact</th>
<th>Total Number (%) of Referred Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>86 (79.6)</td>
<td>22 (20.4)</td>
<td>108 (11.1)</td>
</tr>
<tr>
<td>2</td>
<td>102 (72.3)</td>
<td>39 (27.7)</td>
<td>141 (14.4)</td>
</tr>
<tr>
<td>3</td>
<td>84 (78.5)</td>
<td>23 (21.5)</td>
<td>107 (11.0)</td>
</tr>
<tr>
<td>4</td>
<td>65 (64.4)</td>
<td>36 (35.6)</td>
<td>101 (10.3)</td>
</tr>
<tr>
<td>5</td>
<td>179 (93.2)</td>
<td>13 (6.8)</td>
<td>192 (19.7)</td>
</tr>
<tr>
<td>6</td>
<td>106 (73.6)</td>
<td>38 (26.4)</td>
<td>144 (14.8)</td>
</tr>
<tr>
<td>7</td>
<td>175 (95.6)</td>
<td>8 (4.4)</td>
<td>183 (18.8)</td>
</tr>
<tr>
<td>ALL</td>
<td>797 (81.3)</td>
<td>179 (18.3)</td>
<td>976*</td>
</tr>
</tbody>
</table>

*data were missing for 4 patients

Table 8. Whether or Not Referred Patients had CLP Contact in relation to Fully Integrated Practices and Partially Integrated Practices (n,%)  

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>Number (%) of Referred Patients who had CLP Contact</th>
<th>Number (%) of Referred Patients who had No CLP Contact</th>
<th>Total Number (%) of Referred Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully Integrated</td>
<td>460 (88.6)</td>
<td>59 (11.4)</td>
<td>519 (53.2)</td>
</tr>
<tr>
<td>Partially Integrated</td>
<td>337 (73.7)</td>
<td>120 (26.3)</td>
<td>457 (46.8)</td>
</tr>
<tr>
<td>ALL</td>
<td>797 (81.7)</td>
<td>179 (18.3)</td>
<td>976*</td>
</tr>
</tbody>
</table>

*data were missing for 4 patients

4.2.6 Summary of characteristics of patients referred to a CLP

- Patients referred to the CLP lived in very deprived areas, and although mean SIMD score varied significantly by practice, the majority in each lived in the 10% of neighbourhoods which are the most deprived in Scotland.

- More women (59%) than men (41%) were referred to CLPs but this did not vary by practice. Patients referred to CLPs were mainly below 60 years of age (mean 46 years), and mean age did vary by practice and between Fully Integrated Practices and Partially Integrated Practices.

- Deprivation scores, gender and types of problems were similar between referred patients in Fully Integrated Practices and Partially Integrated Practices, but referred patients were younger in the Fully Integrated Practices.

- Patients referred to CLPs had complex problems with a third of the patients presenting 2 or more problems in different domains (physical, mental and social).
• On average, CLPs made contact with 81% of the patients referred to them, with Fully Integrated Practices achieving significantly more contact than Partially Integrated Practice (88.6% c.f. 73.7%, p<0.001).

4.3 Achieved Patient Samples for the Evaluation Study

4.3.1 Achieved sample in Intervention Practices

Of the 980 adult patients referred to a CLP during the study period (March-December 2015), 559 (57%) were referred to the study team for potential recruitment to the evaluation (Figure 17). Of these 559, 288 (52%) were recruited (representing 29.4% of the Programme patient denominator of 980) and 214 (72.4%) completed the follow-up questionnaire (representing 21.8% of the Programme patient denominator).

Figure 17. Achieved Intervention Practice Study Patient Numerator

Patients recruited and followed-up by the study team were largely representative of all CLP patient referrals except that they tended to be slightly older (Table 9).
Table 9. Characteristics of Patients in Intervention Practices Referred to, Recruited and Followed-Up by, the Study Compared to the Programme Patient Denominator (n, %, mean)

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>INTERVENTION PRACTICE PATIENT STUDY POPULATION</th>
<th>Denominator</th>
<th>Patient Referrals</th>
<th>Patient Recruits</th>
<th>Patient Follow-Ups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female (Number (%)) p value</td>
<td>Age (years) Mean</td>
<td>SIMD Score Mean</td>
<td>Number of Recorded Referral Problems Mean</td>
<td>Number of Recorded Referral Domains Mean</td>
</tr>
<tr>
<td>Denominator</td>
<td>580 (59.2) 0.008</td>
<td>46.43</td>
<td>800.31</td>
<td>2.03</td>
<td>1.45</td>
</tr>
<tr>
<td>Patient Referrals</td>
<td>351 (62.8) 0.008</td>
<td>46.41 0.978</td>
<td>817.95 0.564</td>
<td>2.02</td>
<td>0.623 1.44</td>
</tr>
<tr>
<td>Patient Recruits</td>
<td>176 (61.1) 0.428</td>
<td>48.28 0.108</td>
<td>869.24 0.210</td>
<td>1.98</td>
<td>0.328 1.42</td>
</tr>
<tr>
<td>Patient Follow-Ups</td>
<td>129 (60.3) 0.712</td>
<td>50.01 0.000</td>
<td>944.07 0.057</td>
<td>1.99</td>
<td>0.562 1.40</td>
</tr>
</tbody>
</table>

4.3.2 Achieved sample in Comparison Practices for evaluation study

The study invitation pack, containing a questionnaire was mailed to a random sample of 7,942 adult patients (approximately 1,000 per each Comparison Practice), but 185 were returned undelivered because the addressee was not recognised. Of the remaining 7,757 patients, 612 (8%) returned completed baseline questionnaires (Figure 18). Of these 612 patients, 561(92%) completed the follow-up questionnaire 9 months later.
4.3.3 Summary of achieved Intervention Practice and Comparison Practice patient sample for evaluation study

- Of the 980 adult patients referred to a CLP during the study period (March-December 2015), 559 (57%) were referred to the study team for potential recruitment to the evaluation study. Of these 559, 288 (52%) were recruited and 214 (72.4%) completed the follow-up questionnaire.

- Patients recruited and followed-up by the study team were largely representative of all CLP patient referrals in terms of gender and number of referral problems and domains and deprivation level, but were slightly older (on average by 3.6 years at follow-up).

- In Comparison Practices, a random sample of 7,942 yielded 612 (8%) returned completed baseline questionnaires, and 561(92%) completed the follow-up questionnaire 9 months later.

4.4 Differences between Intervention Practices and Comparison Practice Outcome Measures at Baseline (time-point 1)

The full descriptive data on patients recruited into the outcome study at baseline are given in Tables 1.1.1 – 1.1.9, Appendix 21.

In terms of the characteristics of patients in the outcomes evaluation study at baseline (time-point 1), approximately 60% were female in both intervention and comparison
groups, and English was the first language in 98% in both groups. As expected, there were significant differences in the demographic and socioeconomic characteristics of patients who completed questionnaire at baseline (time-point 1) in the intervention and comparison groups (Table 10). The mean age was 49 years and 56 years in the intervention and comparison groups respectively (p<0.001). Deprivation level was higher in the intervention group; 79% lived in the 20% most deprived areas in Scotland compared with 58% in the comparison group (p<0.001). Less than a quarter were employed in the intervention group compared with almost a half in the comparison group (p<0.001). Over two-thirds of the intervention group lived alone compared with less than half in the comparison group (p<0.001). The primary outcome measure of the evaluation, health-related quality of life (measured by the EQ5D-5L) was significantly lower at baseline in patients in the intervention group compared with the comparison group (p<0.001). Wellbeing (measured by the ICECAP-A) was also significantly lower (p<0.001) as shown in Figure 19.

Figure 19. Quality of Life and Wellbeing Scores at Baseline in Intervention and Comparison Groups (mean)

In terms of other aspects of health status, the intervention group at baseline reported an average of 3.1 long-term conditions each, compared with 2.3 in the comparison group (p<0.001). Anxiety and depression were both higher in the intervention group than in the comparison (p<0.001); 72% of the intervention group has a HADS-Anxiety score above 10 (indicating moderate to severe anxiety) and 58% had HADS-Depression score above 10 (indicating moderate to severe depression) compared with 29% and 19% in the comparison group, respectively. GP visits in the last 6 months were significantly higher in the intervention group than in the comparison group (p<0.001). Almost half (45%) of the intervention group were smokers (compared with 20% in the comparison group, p<0.001) and 58% never took regular exercise (compared with 31 % in the comparison group, p<0.001). Social problems were also more common in the intervention group, with a mean of 3.8 problems compared with 1.8 in the comparison group (p<0.001). From these data it is evident that the patients referred to the CLP had multiple complex problems, as also suggested by the qualitative findings in section 3.
Table 10. Characteristics of Intervention and Comparison Practice Patients at Time-Point 1 (%)

<table>
<thead>
<tr>
<th>Patient Characteristic</th>
<th>Intervention Practice Patients</th>
<th>Comparison Practice Patients</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age in years, (standard deviation)</td>
<td>49 (16)</td>
<td>56 (15)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>59.2%</td>
<td>61.1%</td>
<td>0.61</td>
</tr>
<tr>
<td>In most deprived quintile</td>
<td>79.3%</td>
<td>58.1%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Employed</td>
<td>24.1%</td>
<td>48.7%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Lives alone</td>
<td>67.5%</td>
<td>45.9%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Current smoker</td>
<td>45.2%</td>
<td>20.4%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Never exercises</td>
<td>58.0%</td>
<td>31.0%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mean multimorbidity count, (standard deviation)</td>
<td>3.1 (2.1)</td>
<td>2.3 (1.8)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mean Number of GP visits in last 6 months, standard deviation</td>
<td>5 (9)</td>
<td>3 (3)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Anxiety - HADS-A score above 10</td>
<td>71.7%</td>
<td>29.0%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Depression - HADS-D score above 10</td>
<td>57.5%</td>
<td>19.0%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Social morbidity count Mean (standard deviation)</td>
<td>3.9 (2.5)</td>
<td>1.8 (2.1)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

4.4.1 Summary of Intervention Practices patients and Comparison Practice patients baseline characteristics

- Approximately 60% were female in both intervention and comparison groups, and English was the first language in 98% in both groups.

- At baseline, patients in the intervention group were younger (by 7 years on average), of lower socioeconomic status, and more likely to be living alone, and had more complex problems both in terms of health and social problems than patients in the comparison group.

- Quality of life and wellbeing were markedly lower in the intervention group than the comparison group at baseline, as were many other baseline outcome measures.

- Thus it is clear that the patients recruited into the two arms of the study (intervention and comparator) were not directly comparable in terms of baseline severity of problems.
4.5 Differences in Patient Outcome Measures between Baseline and Follow-up

4.5.1 Analytic approach

As reported above, the demographic characteristics and baseline health and outcome measures of the patients in the intervention group differed significantly and substantially from those in the comparison group at baseline. This was a result of the methods by which the two groups of patients were recruited: in the intervention group, patients were selected by virtue of being referred to the CLP; in the comparison group, patients were selected at random. These differences were therefore expected.

Given that the two groups were different at baseline, a simple comparison of outcomes at follow-up between the two groups of patients would not be a fair comparison; the intervention patients had poorer outcomes to begin with, so it is not surprising that they achieved poorer outcomes nine months later. Similarly, differences in outcomes between groups could be due to differences in age or social deprivation. In order to address this issue, the main analyses used a statistical method known as regression. This aims to estimate the average difference between patients from the two groups, allowing for the differences in other factors and thus helping to compare ‘like with like’.

For each outcome measure, it was decided to look at four different regression models, to answer the following questions:

- Model 1: what is the difference in outcome between groups, adjusting for differences in the outcome measured at baseline?
- Model 2: what is the difference in outcome between groups, adjusting for differences in the outcome measured at baseline, plus age, sex, deprivation, and the number of comorbidities?
- Model 3: what is the difference in outcome between groups, adjusting for all the factors in Model 2, plus baseline measures of employment status, living arrangements, smoking, alcohol intake, physical activity, quality of life (EQ-5D and ICE-CAP), anxiety and depression (HADS), social morbidity, and social functioning impairment (WSAS)
- Model 4: what is the difference in outcome between groups, adjusting for all the factors in Model 2, plus any additional factors from Model 3 that significantly improve the model?

Model 1 is the simplest model – when comparing an outcome between groups when it has been measured at baseline and at follow-up, it is standard practice to adjust for the baseline value; this is the most efficient way to analyse the data.

Model 2 adjusts for basic demographic characteristics. These factors are commonly adjusted for when analysing health outcomes in primary care.
Model 3 is the full model, adjusting for a wide range of health-related factors measured at baseline. The problem with Model 3 is that it is likely to be “over-fitted” – i.e. not all of the factors that are being adjusted for will actually have an association with a particular outcome measure at follow-up. In addition, if any of the adjustment variables are missing for an individual, that individual is lost from the analysis – with more variables being adjusted for, fewer people contribute to this model than other models.

Model 4 is the best model statistically, since it adjusts for the baseline measurement of the outcome being analysed, basic demographic factors, plus the most important baseline measures available. This model gives the best estimate of the true difference in outcomes between the two groups, i.e. the estimated difference in outcome for two (hypothetical) patients, who have the same characteristics at baseline, except that one was referred to the CLP, and one was not.

Although GP Practice did not significantly influence the outcome, it was included in all models as random effect due to the cluster design of the RCT.

The original sample size calculation was based on a simple two-group comparison of EQ-5D scores at follow-up, adjusted for baseline scores via a regression model. In principle, by further adjusting for other baseline factors that predict EQ-5D at follow-up, the analysis should have increased power to detect differences between groups, since a greater proportion of the variability in the outcome measure is accounted for in the regression model.

Although the aim of the research team was to collect baseline patient questionnaires before the patient was first seen by a CLP, this proved to be challenging. Of the 288 patients who completed a baseline questionnaire, 159 (55%) did so before seeing the CLP and 124 (45%) soon afterwards. However, the characteristics of patients who completed before or after in terms of demographics, socioeconomic status, and baseline outcome measure scores did not differ significantly (Tables 3.1 to 3.9, Appendix 21). This suggests that seeing the CLP before completing the baseline questionnaire did not affect the baseline values.

The results are first shown below for the "intention to treat" (ITT) analysis, which included all patients referred to a CLP, whether or not they had contact. This is the standard accepted way of analysing the effects of an intervention. First Intervention and Comparison Practices are compared, and then Fully Integrated Practices and Partially Integrated Practices are compared. The findings of additional "per protocol" analysis are presented in which the outcomes based on those patients who actually saw a CLP are re-analysed, on how many times they saw the CLP and whether they engaged with a community resource. Results are shown below graphically by way of "effect sizes" which shows the size of the difference between the intervention and comparison group outcomes, where an effect size of 0.2 is considered to be small, 0.5 medium, and 0.8 or above, large. It should be noted that smoking was not included in the analysis as an outcome as very few (only 4) patients quit smoking over the follow-up period in the intervention group.

Effect estimates represent standardised effect sizes, expressed in units of one standard deviation, based on the Intervention group distribution at baseline.
The full statistical analyses including all the regression models can be found in Section 5, Appendix 21.

4.5.2 Intention to treat findings – effects of referral to a CLP on outcomes

The primary outcome was health-related quality of life as measured by the EQ-5D-5L. Figure 20 shows the effect of the intervention compared against the comparison group plotted as a standardised effect estimate (this shows the size of the effect, its statistical significance, and whether it shows the outcome of the intervention is better or worse than the comparison group).
In models 1 (controlling for baseline value only) and 2 (controlling for baseline value, age, gender, SIMD, and comorbidity), quality of life at follow-up was significantly worse in the intervention than in the control group. In the full model (models 3) this changed and became marginally better in the intervention patients than in comparison patients but this did not reach statistical significance and the ‘effect size’ was very small (0.034). In model 4 (the best model) this effect reduced further (0.025). Thus, it can be concluded that there was no beneficial effect of the intervention compared with comparison group on quality of life.

Figure 21 shows the effect of the intervention compared against the comparison group on wellbeing as measured by the ICECAP-A. In models 1 and 2, wellbeing at follow-up was significantly worse in the intervention group than in the control group. In the full model (models 3) and model 4 (the best model) the effect was close to zero. Thus, it can be concluded that there was no beneficial effect of the intervention compared with comparison group on wellbeing (ICECAP-A).
**Figure 21.** Effect of referral to a CLP on patients’ wellbeing (effect size)

![Diagram showing the effect of referral to a CLP on patients' wellbeing (effect size)](image)

Figure 22 shows the effect of the intervention on anxiety (as measured by the Hospital Anxiety and Depression Scale). Models 1 and 2 showed that anxiety at follow-up tended to be worse in the intervention than in the control group (note that the ‘favours comparison’ is now shown on the right, as higher scores mean higher anxiety). In the full model (models 3) this changed and became significantly better in the intervention patients than in comparison patients (p<0.001). This effect reduced in model 4 and was no longer statistically significant (p= 0.172), and the effect size reduced substantially. Thus it can be concluded that although there appeared to be a positive effect of the intervention on reducing anxiety after controlling for multiple confounders (model 3) this was not found in the best model (model 4).
Figure 22. Effect of referral to a CLP on patients anxiety (effect size)

Figure 23 shows the effect of the intervention compared against the comparison group on depression (as measured by the Hospital Anxiety and Depression Scale). Models 1 and 2 showed that depression at follow-up tended to be worse in the intervention than in the control group. In the full model (models 3) this changed and became significantly better in the intervention patients than in comparison patients (p<0.027). However, this effect reduced substantially in model 4 to close to zero. Thus it can be concluded that although there appeared to be a positive effect of the intervention on reducing depression after controlling for multiple confounders (model 3) this was not found in the best model (model 4).
There were no effects of referral to a CLP (models 3 and 4) in relation to the work and social adjustment (WSAS scale), number of social problems, lifestyle changes (alcohol, exercise) and healthcare utilisation (number of medications, hospital referrals, out-patient attendances, Accident & Emergency attendances, hospital admissions, duration of admission, and number of GP and PN consultations) (Tables 5.1.5 to 5.1.15, Appendix 21).

There were no significant differences between the Fully Integrated Practices or Partially Integrated Practices in terms of the effects of being referred to a CLP for the primary outcome of health-related quality of life. There were also no effects on any of the secondary outcomes, with the exception of anxiety (HADS), which improved more in the Partially Integrated Practices compared with the Fully Integrated Intervention Practices (Table 5.2.3, Appendix 21).
In terms of healthcare utilisation, there was a significant difference found between Fully Integrated and Partially Integrated Practices in the number of PN consultations, with a higher number of consultations found in the Fully Integrated Practices compared the Comparison Practices (Figure 24). This was apparent in all 4 models.

Figure 24. Effect of referral to a CLP on number of consultations with a Practice Nurse in Fully and Partially Integrated Practices compared with Comparison Practices (effect size)

No differences were found for any of the other measures of healthcare utilisation (Tables 5.2.9 to 5.2.15, Appendix 21).

4.5.3 Further analyses – outcomes in patients who engaged with the CLP and community resources

Further sub-group analyses were carried out in terms of the outcomes for those who actually consulted with a CLP (rather than simply being referred), the number of times seen by the CLP, and whether or not the patients also contacted a suggested
community resource. Again, it should be noted that these sub-group analysis are underpowered as the study power calculation was based on the ITT analysis on all patients referred to a CLP versus comparison patients.

There was no indication of a beneficial effect of consulting a CLP on the primary outcome of health-related quality of life (EQ5D-5L) compared with the comparison group in any of the regression models (Figure 25). In models 1 and 2, outcomes in those who were referred to, but did not see a CLP were worse than in those who did and worse than in the comparison group. However, once adjustments were made for baseline differences (models 3 and 4) this difference was not seen.

**Figure 25.** Patients' health-related quality of life outcome in those who did and did not engage with a CLP compared with comparison group (effect size)
Yes = consulted with CLP at least once; No = referred to CLP but did not consult.
There was also no significant beneficial effect of consulting a CLP more than once on the primary outcome of health-related quality of life (EQ5D-5L) in any of the regression models compared with the comparison group (Figure 26).

**Figure 26.** Patients’ health-related quality of life outcome in relation to the number of times seen by the CLP compared with comparison group (effect size)

![Effect size diagram]

Whether or not the patients contacted a suggested community resource also had no relationship with health-related quality of life outcome (Figure 27).

In terms of secondary outcomes, there was no difference in outcome for wellbeing (ICECAP-A) in those who consulted with a CLP once or more than once, or contacted a community resource (Table 5.3.2, Appendix 21). There were also no differences found in terms of work and social adjustment (WSAS) (Table 5.3.5, Appendix 21) nor number of social problems (Table 5.3.6 in Appendix 21).
Figure 27. Patients’ health-related quality of life outcome in those who did and did not contact a suggested community resource compared with comparison group (effect size)
Yes = contacted community resource; No = did not contact suggested community resource

There were significant differences, however, in anxiety symptoms (HADS) in those who saw a CLP compared with the comparison group (Figure 28). In both model 3 (fully adjusted) and model 4 (best model) the outcomes were significantly better in those who saw the CLP compared with the comparison group.
Patients who saw the CLP only once or two or more times had similar improvements over the comparison group in terms of effect sizes but this only reached statistical significance in those who saw the CLP two or more times did (p = 0.048) as shown in Figure 29.
Patients who contacted a community resource suggested by the CLP also had better anxiety outcomes (Figure 30).
Figure 30. Patients’ anxiety outcome in those who did and did not contact a suggested community resource compared with comparison group (effect size)
Yes = contacted community resource; No = did not contact suggested community resource

Improvements were also found in depressive symptoms (HADS) in those who saw a CLP. Outcomes were generally worse in those who did not see a CLP compared with the comparison group but significantly better than the comparison group in those who did consult a CLP in both model 3 (fully adjusted) and model 4 (best model) as shown in Figure 31.
Figure 31. Patients depressive symptoms outcome in those who did and did not engage with a CLP compared with comparison group (effect size)
Yes = consulted with CLP at least once; No= referred to CLP but did not consult.

The improved depressive symptom outcomes in patients who saw a CLP was only significant (p = 0.026) in those who saw the CLP twice or more (Figure 32).
Figure 32. Patients depressive symptoms outcome in those who saw a CLP once or more than once compared with comparison group (effect size)
Yes = consulted with CLP at least once; No= referred to CLP but did not consult.

Whether patients contacted a suggested community resource had no significant effect of depressive symptoms outcomes (Figure 5.5.4, Appendix 21).

For lifestyle variables, there were no difference between groups in smoking or alcohol intake rates but self-reported exercise was significantly improved (p<0.026 in model 4) in the group who saw a CLP more than once Figure 33).
Patients who contacted a community resource suggested by the CLP also had significantly (p = 0.014 in model 4) better self-reported exercise levels (Figure 34).
In terms of healthcare utilisation, there were no effects of seeing a CLP, number of times seen by a CLP, or contacting a suggested community resource on GP or PN consultations, A&E contacts, hospital admissions, or outpatient appointments as shown in Section 5, Appendix 21). There was no difference in the number of medications in those who saw a CLP compared with the adjusted comparison group, but those who were referred to but did not see a CLP, had significantly more medications (p = 0.001) than the comparison group in the best model (model 4) (Figure 35).
4.5.4 Summary of patient outcome evaluation

- Because baseline variables differed between Intervention Practices and Comparison Practices, the outcome analysis adjusted for these. The most robust statistical model (model 4) retained the standard adjustments (baseline outcome value, age, gender, deprivation, and comorbidity) plus all other variables that differed at baseline and were significant predictors of outcome. The study was powered to sufficiently account for the differences at baseline.

- There were no significant effects of the intervention on an intention to treat basis (referral to a CLP) compared with comparison group patients for the primary outcome (health-related quality of life). There were also no differences between the Fully Integrated Practices and Partially Integrated Practices for the
primary outcome (although the study was not powered to detect such differences).

- There was an indication of an effect of the intervention on anxiety symptoms, which reached significance in model 3 but not model 4. In comparing Fully Integrated Practices and Partially Integrated Practices, anxiety appeared to be reduced more in patients in the Partially Integrated Practices.

- There were no effects of the intervention on any of the other secondary outcome measures, nor on healthcare utilisation. In the Fully Integrated Practices visits to the PN were significantly higher compared with the Partially Integrated Practices.

- Sub-group analyses were carried out on patients in the intervention group who actually consulted with a CLP (rather than simply being referred), the number of times seen by the CLP, and whether or not the patient also contacted a suggested community resource (although the study was not powered to detect such differences).

- There were no differences in the primary outcome of health-related quality of life of those who saw a CLP compared with the comparison group, and this was not influenced by number of times seen by CLP nor whether the patient attended a community resource.

- For the secondary outcomes, anxiety symptoms, depressive symptoms, and self-reported exercise levels were significantly better in those who saw a CLP compared with the comparison group in the adjusted analysis (model 4). These apparent improvements in depressive symptoms and exercise were found in only in those who saw the CLP twice or more. The influence of number of times seen by the CLP was less apparent for anxiety. In those who attended a suggested community resource, anxiety and exercise levels also improved significantly, whereas this was not the case for depressive symptoms.

- In terms of healthcare utilisation, the number of prescriptions per patient was higher in patients who were referred to but did not see a CLP, compared with the comparison group.

- Effect sizes for all significant differences seen were small to moderate.
5. Data Synthesis, Discussion and Conclusions

Chapter 5 presents a synthesis of the process and outcome evaluations detailed in chapters 3 and 4. This addresses aim 4 in the evaluation brief, which was to draw conclusions about the effectiveness of the Programme, and to identify lessons for transferability, sustainability and potential to contribute to a reduction in health inequalities.

Section 5.1 summarises the results of the integration of evidence on effectiveness from both process and outcome evaluations, describes the factors that may have contributed to that, draws out learning for the transferability and sustainability of the Programme beyond the initial phase and considers the potential contribution of the Programme to reduce inequalities in health.

Section 5.2 discusses the strengths and limitations of the evaluation.

Section 5.3 draws conclusions and recommendations.

5.1 Synthesis: Effectiveness, Contributing Factors and Lessons for Transferability, Sustainability and Potential to Reduce Inequalities in Health

Figure 36 shows an integration of findings from qualitative (collected as part of the process evaluation) and quantitative data (collected as part of the outcome evaluation) in relation to effectiveness and to the activities undertaken at patient, practice and community levels to achieve outcomes. The sections below consider effectiveness (Section 5.1.1), contributing factors and lessons for transferability (Section 5.1.2), the potential sustainability of the Programme (5.1.3) and the Programme’s potential to reduce inequalities in health (Section 5.1.4).

5.1.1 Effectiveness

The quantitative evaluation of the Links Worker Programme found no significant benefits of the Programme (after 9 months follow-up) compared with the comparison group when all patients referred to a CLP, regardless of whether they took up the offer, were included in the analysis (intention to treat analysis). The results were confirmed in both the unadjusted analysis and the most statistically robust adjusted analysis (model 4).

The evaluation found, however, that the patients who actually saw a CLP did show significant improvements in anxiety and depression, and reported more exercise over the nine month follow-up period than those in the Comparison Practices (after adjustment for the differing baseline values using the best model). Differences were also seen between patients who saw a CLP and those who were referred but did not see a CLP, in the number of prescriptions in the last six months (which was higher in the latter than the former). Seeing the CLP was not associated with changes in the
primary outcome of quality of life, nor in wellbeing, smoking, alcohol consumption, and self-reported healthcare utilisation of primary and secondary care. Practices varied in the proportion of patients who saw a CLP, with significantly higher percentages in Fully Integrated Practices.
**Figure 36. Integration of findings (at 9 months follow-up): effectiveness and to the activities at patient, practice and community levels**

<table>
<thead>
<tr>
<th></th>
<th>Qualitative findings</th>
<th>Quantitative findings</th>
<th>Convergence, Divergence or Silence in one dataset?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient outcomes</td>
<td>Evidence of some (but not all) patients better able to use community organisations and manage symptoms better. Some evidence of sense of patients ‘being valued’ through un-conditionality and continuity of support from CLPs. GPs ‘realistic’ about outcomes but see some changes in some patients. CLPs feel they are making a ‘real change’.</td>
<td>No effect on any outcome when all patients referred to CLP included in analysis and most robust regression model used. Improved anxiety, depression, exercise, and less prescribed medication in people referred who saw the CLP. Improved anxiety, depression and physical activity if actually attended a community resource. No effect on quality of life, wellbeing or any other outcome even for those who saw a CLP.</td>
<td>Convergence overall Variation in patients’ accounts and in outcome measures but some positive ‘signals’ suggesting some improvements in some outcomes for patients who engage with CLP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Theory of Change: Patient activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One-to-one support and linking with community organisations</td>
<td>All Intervention Practices developed flexible referral pathways between GP and CLP. All CLPs referred to community organisations. CLPs spent considerable time with patients with complex problems.</td>
<td>In all Intervention Practices, the most deprived patients with at least two problems were targeted. On average, 81% of those referred to a CLP saw a CLP but there was considerable variation. In Fully Integrated Practices, 89% of referred patients saw a CLP compare to 74% in Partially Integrated Practices.</td>
<td>Convergence overall Flexible referral pathways within practices worked to identify the most deprived patients who faced considerable difficulties. Variation in proportion of patients referred actually seen by a CLP interesting; not reflected in differences in outcomes with current sample size. CLP intensive work with patients.</td>
</tr>
<tr>
<td>Patient participation in practice activities</td>
<td>Practice-led patient activities in Fully Integrated Practices</td>
<td>No data</td>
<td>Silence in quantitative results</td>
</tr>
<tr>
<td><strong>Theory of Change: Practice activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To support team wellbeing</td>
<td>In all practices in early phase; ongoing only in Fully Integrated Practices</td>
<td>At time point 1, no difference in between proportion of staff who reported participation in activities to support team wellbeing in Fully or Partially Integrated Practices (87% and 78% respectively). By time-point 2, significant difference emerged ((87% c.f. 54% respectively, p=0.0007).</td>
<td>Convergence Similar conclusions from both datasets</td>
</tr>
<tr>
<td>For shared learning</td>
<td>In all practices in early phase; ongoing only in Fully Integrated Practices Receptionists said to be more fully involved in signposting in Fully Integrated Practices</td>
<td>Higher scores on items on team climate in Fully compared to Partially Integrated Practices. At time point 1 (11 months after stating the Programme) on participation and support for innovation. At time point 2 (9 months later) on participation, support for innovation and team objectives. ‘Signposting’ by staff other than CLPs higher in Fully Integrated Practices.</td>
<td>Some convergence. Possibility that scores on team objectives at time point 2 reflects greater involvement of all staff including receptionists in the Programme activities in the practice. On ‘signposting’ Quantitative findings support interpretation of qualitative</td>
</tr>
<tr>
<td>Using information systems to document availability of community organisations (e.g. ALISS)</td>
<td>In all practices in early phase; ongoing only in Fully Integrated Practices</td>
<td>Higher scores on items on team climate in Fully compared to Partially Integrated Practices. At time point 1 (11 months after stating the Programme) on participation and support for innovation. At time point 2 (9 months later) on participation, support for innovation and team objectives</td>
<td>Some convergence. Possibility that scores on support for innovation at time points 1 &amp; 2 reflect greater involvement of all staff including receptionists in the Programme activities in the practice.</td>
</tr>
<tr>
<td><strong>Theory of Change: Community activities</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ongoing networking and linking with community organisations</td>
<td>In all practices in early phase; proactive only in Fully Integrated Practices</td>
<td>Practice staff knowledge of community resources higher in Fully compared to Partially Integrated Practices at both time points.</td>
<td>Convergence. Quantitative findings support interpretation of qualitative.</td>
</tr>
</tbody>
</table>
The positive effects on anxiety, depression and exercise appeared to have required at least two consultations with the same CLP, and outcomes for anxiety and exercise were significantly better if patients actually attended a suggested community resource.

The finding that those who engaged with (rather than being referred to) the CLP did better on some outcomes than those who did not is clearly of interest, as it implies that by improving the uptake rate of the intervention (engaging with CLP and community resources), outcomes could be improved overall. However, these findings should be interpreted with some caution due to the possibility of ‘reverse causality’. This is why the ‘intention to treat’ analysis, is the preferred one, as it avoids any sub-group analysis which can sometimes lead to spurious conclusions about causality. It should also be noted that the study was not powered for subgroup analyses.

The 12 patients interviewed in the qualitative study engaged variously with the CLP and/or COs, some reported excellent, and some less good, experiences. Patients placed value on un-conditionality, being listened to, and being able to come back whenever they felt they needed to. Although the GPs were realistic about expected positive outcomes in patients, some were impressed by the increasing engagement of patients with social prescribing. CLPs certainly reported that they felt they had made a real difference to many of their patients’ lives, and this was recognised by GPs and other practice staff.

The original and emergent theories of change suggested that practices would need to undertake activities at patient, practice and community levels to achieve outcomes. All Intervention Practices developed flexible referral pathways between GP and CLP and practices effectively targeted the most deprived patients who had complex needs (usually with at least two or more different types of social, physical or mental health problems). All Intervention Practices were able to implement one-to-one support for patients by the CLP and GPs also reported signposting patients directly to COs. Offering one-to-one support for patients is the everyday ‘business’ of general practice and it is not surprising that practices found it easiest to embed these activities.

Intervention Practices differed in the extent to which they were able to integrate practice and community development aspects of the Programme. Compared to staff in 4 Partially Integrated Practices, by the end of the evaluation staff in 3 Fully Integrated Practices were more likely to report:

- reception staff engaged in signposting patients to COs
- activities like walking groups led from within the practices
- ongoing practice activities to promote team wellbeing, shared learning, and use of information systems
- pro-active community networking ongoing.

Integration of these activities was facilitated when there was shared leadership and vision between GP, PM and CLP, good team relationships and functioning, continuity of CLP support and absence of other ongoing (competing) innovations, as reported by the 3 Fully Integrated Practices. Validated staff measures of job satisfaction and team climate showed no effect of the intervention overall compared with Comparison Practices. However, significant differences were found between Fully Integrated Practices and Partially Integrated Practices on job satisfaction at time-point 1 and
aspects of team climate both at time-point 1 (11 months after the start of the Programme) and nine months later (time-point 2). Specifically at time-point 1 staff in Fully Integrated Practices reported higher job satisfaction and higher rates of participation and support for innovation and at time-point 2 also on team objectives. Staff in the Fully Integrated Practices also reported less likelihood of giving up direct patient care in the next five years than staff in the Partially Integrated Practices at time-point 2.

Participation in activities to promote staff wellbeing was significantly higher in the Fully Integrated Practices than in the Partially Integrated Practices at time-point 2. Practice staff knowledge of local community resources tended to be lower in the Partially Integrated Practices than in the Fully Integrated Practices and ‘signposting’ patients to local community resources by staff (other than CLPs) was reported to be substantially lower in Partially Integrated Practices than in Fully Integrated Practices by time-point 2.

5.1.2 Contributing factors and lessons for transferability

The study design, which measured outcomes of the ‘full package’ of the Links Worker Programme in the Intervention Practices compared to ‘usual care’ in the Comparison Practices, means it cannot be said with absolute certainty which aspects of the Programme were essential (the ‘active ingredients’) and which ‘desirable’. However, the synthesis of qualitative and quantitative findings allows some suggestions which also relate to what is needed for the Programme to be transferred or repeated in other practices.

First, funding for the CLP and for their close one-to-one work with patients was regarded as crucial by all interviewed staff in Intervention Practices, and seeing the CLP appeared to result in improved patient anxiety, depression and physical activity and reduced prescribing. The flexibility and person-centred nature of the work was seen as crucial by CLPs and their un-conditionality and relational continuity valued by patients. The kind of work that CLPs were doing can be seen as ‘fixing as well as linking’ but in this environment, in which people live in circumstances that lead to many deep, intractable, problems was probably necessary. The Comparison Practices, although sympathetic to the approach and with an apparently clear idea of what would be needed to implement it, showed little or no links-type activities over the course of the evaluation. The importance of a single facilitator or coordinator like a CLP focused on the needs of individual patients has been identified as important in other studies and is clearly critical to the Deep End Links Worker Programme. Any subsequent implementation of the Programme in similarly deprived practices should be certain to allow CLPs to work within general practices in flexible ways.

Second, a more unusual feature of the Deep End Links Worker Programme compared to other social prescribing initiatives was the practice development fund. This was also seen as crucial by staff interviewed in practices. It was spent on a wide variety of equipment and activities all of which were designed to enhance the smooth integration of the Programme. In all intervention practices the main item ‘bought’ with the practice development fund was time; time for GPs to spend on non-clinical activities and time to relieve the pressure on reception staff so they could undertake other links-type activities such as signposting. This time was also crucial to allow practices to develop
the flexible referral systems needed to effectively target the most deprived people with complex problems. Fully Integrated Practices were able to spend more of their practice development fund in the first year of the Programme which suggests that they may have been more able to 'hit the ground running'. Other research on social prescribing, care coordination, and health care navigators have identified concerns over funding as one of the main barriers for implementation and a small study in Scotland identified lack of practice capacity for innovation in the face of relentless demand for care as one of the main explanations for slow implementation of planned changes. Although there is no evidence of what the 'right' amount should be, nor definitive evidence of its role in improving patient outcomes over the longer term, a practice development fund is likely to be essential to allow initial changes in the way a practice works to embed the Programme in the first two years.

Third, the findings that team climate score were better in Fully Integrated Practices compared to Partially Integrated Practices are important. Fully Integrated Practices were characterised by shared leadership and vision between GP, PM and CLP, good team relationships and functioning, continuity of CLP support and absence of other ongoing, competing innovations. The inter-relationships between leadership style, team relationships and staff wellbeing are not clear, especially because it was not possible to undertake the first measurement until 11 months after the Programme was started. Good leadership, and especially facilitative leadership, has also been found to be important for coordinated care. It is possible that ongoing support to develop collective leadership style in Partially Integrated Practices would help in the longer term. Although this may not be necessary for good patient outcomes, practice team wellbeing is especially relevant now, when general practice in Scotland and the rest of the UK is facing unprecedented demand and a major workforce crisis.

Fourth, it is not known how many of the Partially Integrated Practices would have become Fully Integrated over a longer timeframe. Adding a new member of staff (the CLP) to the practice team and finding ways to refer patients to them proved relatively easy to integrate into everyday practice routines. The practice-level activities, such as activities for shared learning and staff wellbeing, were much more unusual for practices and may have needed more time to embed or more time to overcome barriers. The King’s Fund report on care coordination certainly suggests that embedding new ways of working can take up to five years. On-going support might help practices to ‘keep at’ the more unusual (for them) practice development and proactive community development activities even in the face of ongoing challenges as suggested below.

Fifth, the process evaluation showed that the activities articulated in the theory of change were largely implemented as planned (apart from the difficulties in embedding practice-level and proactive community networking activities into Partially Integrated Practices). It is possible that initial planning and reporting to the Alliance was helpful in guiding activities, at least at patient-level, although it was not enough to assure continuation of the more unusual (for practices) practice- and community-level activities. However, it was also found that no practices embedded CLP records with other patient records and none had ongoing formal systems for monitoring outcomes. Any monitoring was informal. These findings combined suggest that continued engagement with a practice-level theory of change is important, and that practices involved in any future roll-out should be clear about why they undertake any set of
activities, why they are important to embed into the life of the practice, what outcomes they can expect, and how they should measure them. In short, on-going monitoring of both processes and outcomes are important and will be likely to help practices more readily respond when activities may not go quite as planned.

Finally, the practitioners referring the patients to the CLPs (mainly GPs) were clearly identifying ‘links-suitable’ patients who had complex problems and were very deprived (even more so than the practice population). This implies the GPs were using a biopsychosocial approach within routine consultations despite the limitations on consultation length imposed by the inverse care law.\textsuperscript{52, 53} A previous review\textsuperscript{10} also identified the involvement of health professionals as important to the success of other social prescribing initiatives and these findings combine to suggest that GPs and other clinicians with good knowledge of patient needs should continue to be the main referral route through which CLPs receive patients in any subsequent implementation of the Programme.

5.1.3 Potential sustainability of the Programme

No quantitative data on the potential financial sustainability of the Programme were available. Because the Programme had no effect on quality of life, even if cost data were available, the Programme would be unlikely to be a cost-effective investment if judged by the criteria usually used by the National Institute for Health and Care Excellence (NICE) (as assessed to 9-month outcomes and based on the self-reported healthcare utilisation data collected). The usual criteria used by NICE is an incremental cost effectiveness ratio of less than £20,000 per quality adjusted life year gained (quality adjusted life years can be calculated from changes the quality of life measure (EQ5-DL) used in this study). Longer term outcomes, over 2-3 years, with linked health and social care utilisation drawn from the most robust sources, would be required to answer this important question more fully.

Analysis of the qualitative data showed that staff working in Intervention Practices identified financial resources for practice development, time, leadership, and CLP support as essential for the continuation of the Programme. Both practice and CO staff expressed concern about the sustainability of the overall Programme model. As Smith and Skivington\textsuperscript{43} reported, practice staff were concerned about the capacity of COs, in the context of austerity and less funding being available, to deal with increasing numbers of patient referrals. Equally, staff in COs were concerned that the CLP role might not be sustained if funding were cut, and that the effort they had put into developing relationships would be wasted.

These are clearly important considerations to be made in planning integrated care. Any wider implementation of the Programme would do well to assess the long-term sustainability of community-based organisations in the face in increasing austerity and cuts to local services being offered. Wider implementation of the Links Worker Programme in deprived areas would fail if COs do not have capacity to meet demand.

5.1.4 Potential to reduce inequalities in health

The interim report argued that rather than reduce inequalities, the Programme had potential only to mitigate them, especially in the context of on-going austerity,
implementation of welfare reforms, and cuts to the budgets available to local COs. This assessment was made because although the Glasgow Deep End Links Worker Programme specifically targets those most in need it does not, and cannot, tackle the more ‘upstream’ determinants of inequalities such as unequal power, wealth and access to good living environments.

As described in the introduction (Section 1), despite the recent popularity of social prescribing with policymakers, a robust evidence-base for its effectiveness and cost-effectiveness is largely absent. The randomised controlled trial by Grant et al (2000) is the most similar intervention to the current one, in that it is also a link-worker approach, and targeted patients with psychosocial problems (as identified by the GPs). However, the patients recruited were generally not of low socio-economic status (only 10% were in lowest two social classes on a five point scale).

In the face of the ‘unending struggle’ faced by patients living in very deprived areas and with multiple problems it is not surprising that no effect of the intervention on quality of life and wellbeing in the present evaluation was found 9 months after baseline. It is possible that effects would have been seen over a longer-time period. The CARE Plus study found some evidence of improvement in quality of life and wellbeing in multi-morbid patients in Deep End Practices at 12 months, suggesting that primary care can help mitigate the effects of deprivation. It is also possible that a more robust experimental design, in which patients deemed suitable for a CLP referral were randomised at that point to receiving it or not - which would have avoided the large baseline differences between intervention and comparison groups - may have yielded different results.

The finding that those who engaged with the CLP showed better adjusted outcomes than the comparison group for mental health outcomes and exercise does suggest that the Glasgow Deep End Links Worker Programme may have some limited effects on mitigating the effects of deprivation on health. It is also possible that the addition of a CLP to the practices mitigated, to some extent, the inverse care law; they were certainly appreciated by all GPs in all Intervention Practices many of whom were relieved to have a referral route through which people could be supported. However, in no analysis was a reduction in self-reported GP or PN consultations observed, and indeed PN consultation increased in the Fully Integrated practices.

5.2 Strengths and Limitations

The current evaluation is the first, large-scale, quasi-experimental general-practice-level cluster randomised controlled trial to evaluate a social prescribing initiative conducted in the world.

It has a number of strengths. It combined qualitative and quantitative data in a mixed-methods approach, and sought to integrate the findings from both approaches. It collected qualitative data at community, practice and patient levels and quantitative data at patient and practice levels, and sought to understand the processes involved in delivering the Programme as well as outcomes from the Programme.

Strengths of the qualitative process evaluation included the use of NPT to investigate how implementation was achieved, which allowed identification of the extent of
variation in integration of Links-activities into routine practice. Data were collected from multiple practice staff perspectives and from focus group discussions, email survey, in-depth interviews during implementation and end of evaluation interviews and, except for the second email survey, response rates were high. This enabled detailed case studies to be constructed. Although gathering data from staff in COs proved difficult, findings from a separate sub-study were incorporated into the overall findings reported here.

The main strengths of the quantitative evaluation, which comprised staff and the patient surveys, were the relatively large sample sizes, and the high response rates achieved at follow-up. The sample size for the patient survey was based on a power calculation and the sample size achieved exceeded this. The pre-designated study sample size was based on the primary outcome of quality of life (EQOL5D-5L) and designed to detect between-group differences of 0.274 standard deviation (SD) units, which was based on the minimally important difference for this measure in the UK population.39

In terms of the effects seen on mental health in the sub-group analysis, and especially on anxiety, the question arises as to whether the sample size was big enough to also detect a significant change in HADS anxiety in the full sample (intension to treat analysis; all those who were referred to a CLP). Given that the standard deviation (SD) of HADS anxiety scores was approximately 5 units, and assuming that the other assumptions used in the sample size calculation were met (in relation to clustering of outcomes, and correlation over time), the study would have been powered to detect difference in HADS anxiety scores of approximately 1.4 units. This size of difference is similar to that reported to be the minimally important difference for the HADS anxiety scale.58 The comparison between groups in HADS anxiety scores in the intention-to-treat analysis found an estimated difference of 0.41 units, with a 95% confidence interval (CI) of (-0.99, 0.18). This confidence interval is quite narrow, being entirely within the range ±1.4 units, suggesting that the study was adequately powered for this outcome. In addition, since the CI does not include -1.4, which would be seen as a minimally important benefit, the possible improvements found in anxiety in the patients in the intervention compared with comparisons in the intention-to-treat analysis are very unlikely to be of clinical significance. In the ‘per protocol analysis’ which focused on those who engaged with the CLP, number of times seen, and contacted suggested community resources, the estimated mean differences were larger (approximately 1 to 1.4) suggesting that the size of the improvements seen in anxiety and depression may be approaching clinical relevance, even though the effect size was small to moderate.

Included in the evaluation were a range of relevant validated tools in both the staff and patient surveys. The patients who completed the survey at both the data collection periods were generally representative of all patients referred to the CLP during the study period, in terms of gender and deprivation, and were only marginally older.

Practices were randomised and the interim report showed they were broadly comparable in relation to all relevant characteristics. However, Intervention Practices were given complete flexibility to decide which patients should be referred to a CLP. Whilst this was a key feature of the original and emergent theory of change for the Programme19 it made designing an evaluation to achieve comparability of patients very difficult. This led to one of the key limitations of the research design - a
substantial imbalance in the characteristics of the patients in the intervention and comparison groups at baseline. For each outcome, what is called Model 4 is the best estimate of the average difference between the two groups, allowing for differences between the two groups at baseline.

By and large, these models show little evidence that outcomes were any different in the Intervention Practices and Comparison Practices. A careful approach was adopted to take account of baseline differences, whereby the variables that were measured were adjusted for, to ensure that the analysis was a statistically robust as it could be. Other unmeasured variables relating to the characteristics of patients referred to CLPs and not present (or less common) in the patients randomly sampled from the Comparison Practices could be important but unknown confounders. It is not possible to rule out the possibility that referral to the CLP was associated with different outcomes at follow-up, relative to the outcomes that would have been achieved by these patients, had they not been referred. Nevertheless, there is a consistent picture of a lack of clear benefit from all of the analyses. In addition to the current analysis approach (regression modelling), two other methods were explored, case matching and propensity scores. Neither of these approaches proved to be entirely satisfactory, and there was no indication that they altered the findings or conclusions at all. In order to have a high degree in confidence regarding the effect (or lack of effect) of the intervention on patient outcomes, a randomised trial would be required, in which individual patients for whom referral would be appropriate are assigned at random to be referred or not. This would differ from the current approach, in which practices rather than patients were randomised to the intervention and comparison groups.

Of those patients referred to the CLP, 57% had their details passed on to the research team for recruitment into the study. The reasons for this, and the substantial variation in referrals to the study team between practices, are not clear. It is possible that in busy general practices, faced with people with multiple complex needs, GPs or CLPs were either reluctant to suggest to patients that they participate in the evaluation or simply forgot. It is also possible that patients were reticent to take part. In previous studies in similarly deprived practices in Glasgow recruitments of almost 70% of patients invited to take part in the study were achieved. Once patients were recruited in the current evaluation, high follow-up rates were achieved, in line with the authors’ previous work.

It also proved challenging to collect baseline patient outcome measures in all patients prior to them seeing a CLP – in approximately 55% of cases this was achieved but in 45% it was not. However, the analysis of the baseline characteristics of those who completed the patient questionnaire before or after first seeing the CLP showed no differences, suggesting that the initial meeting with the CLP did not inflate the baseline scores.

The number of instruments that could be included in the patient survey was limited by the patients’ ability and willingness to complete the questionnaire, and after piloting some of the measures originally suggested had to be removed. However, the measures we retained covered important and relevant outcomes and were all validated instruments which had been used before in similar populations.
5.3 Recommendations

The synthesised findings summarised in this section, considered together, suggest that:

- Any subsequent implementation of the programme in similarly deprived practices should be certain to allow CLPs to work within general practices in flexible ways.
- A practice development fund is likely to be essential to allow initial changes in the way a practice works to embed the Programme in the first two years.
- On-going support to develop collective leadership style in ‘partially integrated’ type practices might help them move more quickly to fully integrating all aspects of the Programme. Although this may not be necessary for good patient outcomes, it does seem to improve patient engagement. Additionally, practice team wellbeing is especially relevant now, when general practice in Scotland and the rest of the UK is facing unprecedented demand and a major workforce crisis.
- On-going support might also help practices to ‘keep at’ the more unusual (for them) practice development and proactive community development activities even in the face of ongoing challenges.
- Practices involved in any future rollout should be clear about why they undertake any set of activities, why they are important to embed into the life of the practice, what outcomes they can expect, and how they should measure them.
- Related to this, on-going monitoring of both processes and outcomes are important. Systems to do this should be developed and will be likely to help practices more readily respond when activities may not go quite as planned.
- GPs and other clinicians with good knowledge of patient needs should continue to be the main referral route through which CLPs receive patients in any subsequent implementation of the Programme.
- Any wider implementation of the Programme would do well to assess the long-term sustainability of community-based organisations in the face in increasing austerity and cuts to local services being offered. Wider implementation of the Links Programme in deprived areas would be doomed to fail if COs do not have capacity to meet demand.
- An evaluation of longer-term outcomes of the patients in the existing 7 Intervention Practices, over 2-3 years, with linked health and social care utilisation drawn from the most robust sources, will be required to assess whether the Programme is cost-effective according to usual criteria.
- Given the very limited evidence-base worldwide for the effectiveness of social prescribing and Links Worker type interventions, serious consideration should be given to conducting a new high quality randomised controlled trial in which patients deemed suitable for CLP support are randomised at patient level, thus overcoming the problems of unmatched intervention and control groups observed in the current evaluation.
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