

**Glasgow 'Deep End' Links Worker Programme
Practice Audit Questionnaire Evaluation**

14 April 2016

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1. SUMMARY

An audit questionnaire was sent to 551 patients, identified by GP practices, who were referred to Community Links Workers during the first 11 months of the Programme (April 2014-March 2015).

Findings

- 125 (23%) patients replied. Respondents did not differ significantly from non-respondents in terms of gender (60% were female) or deprivation (approximately 80% were in the top quintile of deprivation) but were somewhat older (although there was a high level of missing values for non-respondents).
- The reported number of contacts with the Community Links Workers averaged 3.4 per patients, and 55% reported more than 3 contacts.
- Two-thirds of patients reported that they found contact with the Community Links Worker helpful, and 60% reported some improvement in wellbeing (25% reporting a major improvement). Women reported a higher improvement than men.
- The improvement in wellbeing was positively and significantly related to the number of times seen by the Community Links Worker, and to the perceived helpfulness of the Community Links Worker.
- Three out of four patients reported that the Community Links Worker had suggested a community resource, and 60% of these (43% overall) reported making contact. Contact with a community resource was positively and significantly related to overall improvement in wellbeing.
- Respondents listed 42 community resources; mental health support was the commonest type of resource listed (36.5%).

Conclusions

Caution is required in the interpretation of these findings, given the low response rate and retrospective nature of the outcome measurements. However, overall the findings suggest that:

- The Programme is reaching deprived patients with evidence of perceived benefit
- Community Links Workers, although offering support initially (averaging 3-4 contacts), are not then becoming long-term support workers
- Both sorts of activities (working individually with the patient to 'fix' their problems or 'linking' the patient with community resources) were positively and independently related to perceived improvements in wellbeing. It is likely that the Community Links Workers are adopting a pragmatic 'generalist' approach by combining 'linking' and 'fixing' functions flexibly depending on the patients' needs and wishes.

2. INTRODUCTION

General practitioners (GPs) serving patients in areas of high deprivation face many challenges due to the health inequalities that affect these populations. These challenges do not merely revolve around health-related issues, but also encapsulate mental and social concerns. The inverse care law, first described by Julian Tudor Hart, denotes that good medical care tends to be least available to those that need it most [1]. The lack of adequate funding of general practice in deprived areas exacerbates health inequalities [2] and contributes to poorer health outcomes for those in areas of high deprivation [3,4].

The gradient in health inequality is particularly steep in Scotland, affecting both disease prevalence and life expectancy. Over the past 50 years life expectancy and health have been steadily increasing, however due to different rates of progression between socioeconomic groups, health inequalities continue to increase [5]. In Glasgow, the average life expectancy for males is 81.0 years in the least deprived areas and 70.1 years in the most deprived areas. The pattern for females follows this trend with 84.2 years compared to 76.8 years. The percentage of adults who smoke rises from 11% to 40% between areas of low and high deprivation. The alcohol-related hospital admission rate is over seven times higher in the most deprived compared with the least [6]. These statistics indicate that deprived populations have greater case complexity and are more intertwined with social factors and thus the need for the inverse care law to be reversed in order to help reduce health inequalities [1-4].

In 2007, the Scottish Government prioritised the need to tackle health inequalities [7]. The GPs of the 100 practices in Scotland serving populations of the highest levels of deprivation, as judged by the Scottish Index of Multiple Deprivation (SIMD), became a group known as the GPs at the 'Deep End'. They have published a series of reports describing the difficulties faced by practitioners in deprived areas. These illustrate that the increasing prevalence of chronic conditions and mental health issues puts strain on available resources [8]. Many GPs feel that this leaves them unequipped to deal fully with the high levels of psychosocial problems they encounter. The Deep End GPs report that the lack of links between primary care and resources in the community further exacerbates this.

As a component of these reports, the Deep End GPs suggested social prescribing as a means of improving links between the primary care team, patients and community resources [9]. Social prescribing is the signposting of patients to non-clinical services within the community, predominantly for psychosocial or practical needs. This would allow patients to become more involved in their own

care, enabling them to take control of both their health and social issues by promoting self-reliance. This principle of providing patients with the resilience and ability to manage their own health forms a core value of the Deep End group [10].

In 2014, a subgroup of Deep End GPs in Glasgow in collaboration with the Health and Social Care Alliance Scotland (Alliance), a third sector intermediary for a range of health and social organisations, were funded by the Scottish Government to pilot a Community Links Worker (CLW) Programme [11]. The CLWs, who are from a range of community development backgrounds, act as 'social prescribers', forming an integrated role in the primary care team. Out of the fifteen practices in Glasgow that applied, seven were selected to be given a CLW (6 were randomly selected; the other is the practice of the Programme's clinical lead). The remaining eight that were not selected agreed to act as comparator practices to enable an evaluation of the effectiveness of the scheme paralleled with similar patient populations.

Patients can be referred to the CLW by any member of the practice team, including the GP. They are then seen by the CLW and referred to relevant resources based on the needs they identify together. However, from the onset, the aim was to give the CLW the autonomy to work in a pragmatic, patient-centred way, similar to the unconditional and generalist function of GPs. CLWs also have a key role in working with practice staff to develop culture change in terms of the use of community resources.

In September 2014, the University of Glasgow began an evaluation of this CLW Programme and patient level data collection commenced in March 2015. However CLWs began seeing patients from April 2014 and the evaluation team has previously reviewed the patients seen by CLWs before the formal evaluation began by way of an analysis of case records collected by the Alliance during this period. The current audit complements this by retrospectively assessing patients' views on the CLW scheme and perceived benefits from seeing a CLW.

3. THE COMMUNITY LINKS WORKER PROGRAMME PRACTICE AUDIT

A short audit questionnaire was developed in collaboration with the clinical lead for the Programme, the participating practices and the Alliance. This was sent to patients, identified by participating practices, who had been involved in the CLW Programme during the first eleven month period from April 2014. The questionnaire responses were analysed to gain an insight into the perceived effectiveness of the Programme and the level of patient engagement.

3.1 Aims

The overall aim of the audit was to evaluate the perceived effectiveness of the CLW Programme. Specifically, the objectives were to:

1. Describe the demographics of the questionnaire population, including a comparison of respondents and non-respondents.
2. Evaluate the perceived effectiveness of the Programme based on measures including wellbeing score and perceived helpfulness of the CLW.
3. Identify the types of community resources being suggested to patients and the extent of contact with these.

3.2 Methods

Study Population

For the audit, participating practices were asked to identify all patients who were first referred to a CLW between the 1 April 2014 and the 28 February 2015. Patients were excluded by the practice GPs when this was deemed necessary due to personal circumstances (e.g. recent bereavement).

Questionnaire Design

The questionnaire featured 10 questions based around the patients' perception of their contact with the CLW. In order to obtain an impression of the study population, further questions on the patients' demographics were included. It included a measure of patient-reported outcomes of perceived change in overall wellbeing, which has been used previously in primary care and secondary care in Glasgow, and which has undergone limited previous validation [12].

The following were included in the questionnaire:

Question		Response Options
1.	How long ago is it since you met with the Community Links Worker (or spoke over the phone) for the first time?	1. Less than 3 months ago 2. Between 3 and 6 months ago 3. Over 6 months ago 4. I do not remember speaking to the Community Links Worker
2.	Roughly how many times did you meet or speak with the Community Links Worker?	Numerical
3.	Did you find this helpful?	1. YES, very helpful 2. YES, quite helpful 3. NO, not helpful
4.	Since first seeing/speaking to the Community Links Worker, has your overall wellbeing changed?	1. YES, major improvement in wellbeing 2. YES, slight improvement in wellbeing 3. NO, no change in wellbeing 4. NO, wellbeing has got worse
5.	Did the Community Links Worker suggest a resource in the community?	Yes/No/Can't remember
6.	If yes, did you have contact with the suggested resource?	Yes/No/Can't remember
7.	If yes, write the names of the suggested resources	-----
8.	Age	Numerical
9.	Gender	Male/Female
10.	Language spoken at home	English/Other

Data Input

An Excel housekeeping database was kept of the contact details of all patients who were sent a questionnaire. This included their postcodes, from which their Scottish Index of Multiple Deprivation (SIMD) score could be derived. A separate Excel database was created to enter the data in the completed questionnaires that were returned to the study office. Individuals' responses were linked to the housekeeping data by means of a unique identifier. The responses to the audit questions were assigned a code, including missing values. By these means depersonalised data were entered, these were then converted for analysis in SPSS Statistics 22.

Data Analysis

Descriptive methods were used to analyse the data. Non-parametric tests were used, as the data was predominantly categorical and non-linear. Correlations between variables were also obtained, using Spearman's Correlation Coefficient to determine the strength of any associations. Chi-Square was used to compare respondents to non-respondents. Independent sample t-test was used to compare differences relating to age.

3.3 Results

Population Demographics of All Patients sent the Audit Questionnaire

Five hundred and fifty-one patients were sent the questionnaire of which 332 (60%) were female.

Table 1 shows the frequency and percentage of patients by variable, as a proportion of all who were sent a questionnaire. The patients' age was not provided by all practices, in total there were 268 (49%) missing values for age. The mean age of the 283 (51%) who had a recorded age was 50.3 years (range 16 to 93 years) with 44.5% being aged between 40 and 59 years.

Almost 82% of patients were in the most deprived quintile of deprivation. SIMD could not be established for 7 patients as their postcode did not register in the index.

Table 1: Characteristics of patients sent the audit questionnaire

Variable	Frequency	Percentage (%)
Gender		
Male	219	39.7
Female	332	60.3
Total	551	100.0
Age Group		
16-19	8	2.8
20-29	31	11.0
30-39	38	13.4
40-49	71	25.1
50-59	55	19.4
60-69	31	11.0
70-79	30	10.6
80+	19	6.7
Total	283	100.0
SIMD Quintile		
1-most deprived	444	81.6
2	49	9
3	29	5.3
4	12	2.2
5 – least deprived	10	1.8
Total	544	100.0

Respondents compared to Non-Respondents

One hundred and twenty-eight questionnaires were returned, representing a 23% response rate. Table 2 compares the characteristics of respondents and non-respondents. The gender balance was equal in both groups (60% female). The mean age of respondents was 56.5 years compared with 45.2 years for the non-respondents ($p < 0.001$). However it should be borne in mind that there was a high level of missing data on age in the non-respondents (267; 63%).

Deprivation status of the patients did not differ significantly with 78% of respondents being in the most deprived quintile and 83% of non-respondents. There were 3 values were missing for SIMD decile for respondents and 4 values missing for non-respondents.

Table 2: Comparison the Characteristics of Respondents and non-Respondents to the audit questionnaire

	Frequency (Percentage)		p-value
	Respondents	Non-Respondents	
Gender			0.857
Male	50 (39.1)	169 (40.0)	
Female	78 (60.9)	254 (60.0)	
Total	128 (100.0)	423 (100.0)	
Age Group			<0.001
16-19	0 (0.0)	8 (5.1)	
20-29	9 (7.1)	22 (14.1)	
30-39	9 (7.1)	29 (18.6)	
40-49	34 (26.8)	37 (23.7)	
50-59	24 (18.9)	31 (19.9)	
60-69	18 (14.2)	13 (8.3)	
70-79	20 (15.7)	10 (6.4)	
80+	13 (10.2)	6 (3.8)	
Total	127 (100.0)	156 (100.0)	
SIMD Quintile			0.173
1-most deprived	97 (77.6)	347 (82.8)	
2	12 (9.6)	37 (8.8)	
3	10 (8.0)	19 (4.5)	
4	4 (3.2)	8 (1.9)	
5-least deprived	2 (1.6)	8 (1.9)	
Total	125 (100.0)	419 (100.0)	

Audit Questionnaire Results

Of the 128 questionnaires that were returned, 121 (95%) of patients spoke English as their first language, 5 spoke another language (4%) and 1 spoke both English and another language as first languages. There was 1 missing value.

In terms of how long it had been since the patients had first seen the CLW, almost half (49%) reported more than 6 months ago (Table 3). There were 3 missing values. In terms of the number of contacts they had had with a CLW, there were 17 missing values (13%). The mean of those who answered was 3.4 contacts with a range from 1 to 20. There was a fairly even spread across one to six or more times seen (Table 3). The majority (55%) were seen 3 or more times.

Table 3: Audit Questionnaire Results

When Patient was Seen	Frequency	Percentage (%)
Less than 3 months ago	34	27.2
Between 3 and 6 months ago	26	20.8
More than 6 months ago	61	48.8
Do not remember seeing Community Links Worker	4	3.2
Number of Times Seen	Frequency	Percentage (%)
1	25	22.5%
2	25	22.5%
3	21	18.9%
4-5	23	20.7%
6+	17	15.3%
How Helpful Patient Found the Community Link Worker Contact	Frequency	Percentage (%)
Very Helpful	77	63.6
Quite Helpful	35	28.9
Not Helpful	9	7.4
Improvement in Wellbeing	Frequency	Percentage (%)
Major Improvement in wellbeing	33	25.8
Slight improvement in wellbeing	44	34.4
No change in wellbeing	29	22.7
Wellbeing has got worse	14	10.9

121 (95%) answers were recorded for how helpful the patient found the contact with the CLW. Almost two-thirds reported finding the CLW very helpful, and few found the CLW not helpful (Table 3).

120 (94%) answers were collected for patient-perceived change in wellbeing since their contact with the CLW. Over 60% reported improvement in wellbeing, with one in four reporting a major improvement (Table 3). There was a clear relationship between the number of times the patients was seen by the CLW and their perceived improvement in wellbeing (Figure 1).

By looking at correlations between the different variables obtained it was possible to build up a more detailed picture (Table 4). There was a significant correlation between the number of times the patient had been seen by the CLW and the perceived helpfulness, and between the number of times seen and perceived improvements in wellbeing. Unsurprisingly, perceived helpfulness and improvements in wellbeing were positively correlated.

There was a significant negative relationship between perceived helpfulness and the length of time ago that the patients was seen (lower perceived helpfulness in those seen longer ago), but this was not found for reported changes in wellbeing. Age had no significant relationship with any of the outcomes (Table 4).

Figure 1 Relationship between number of times seen by Community Links Worker and Improvement in Wellbeing

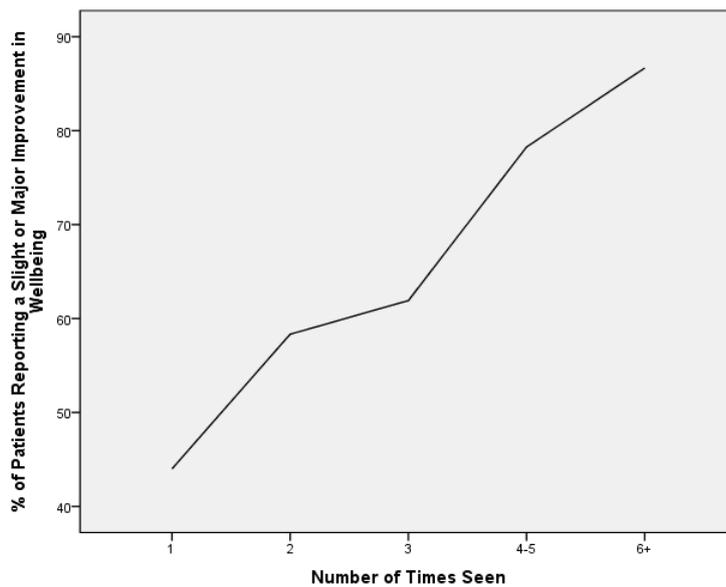
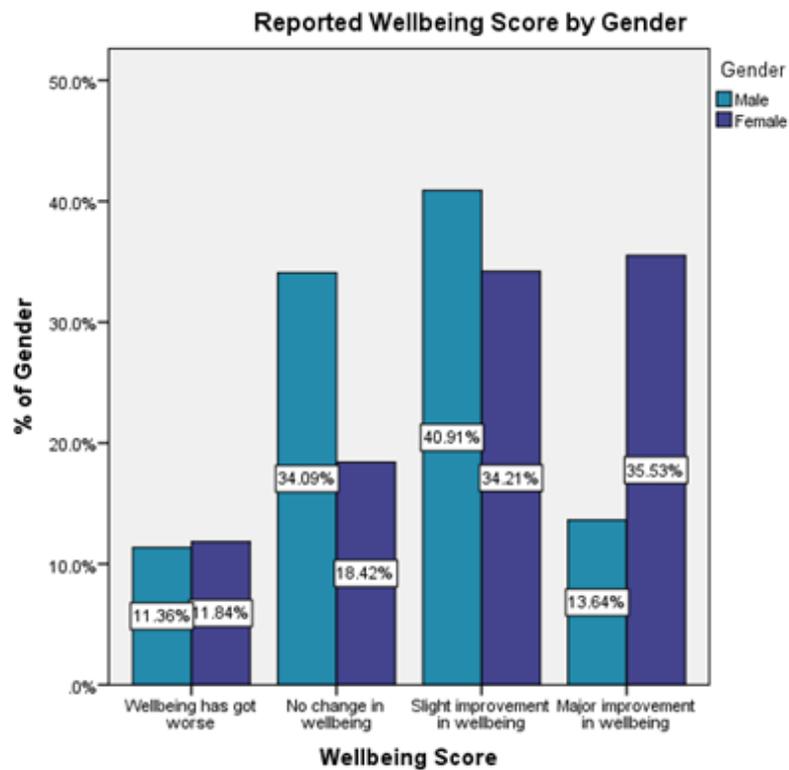


Table 4: Correlations between variables

	Number of times patient was seen	How long ago patient was seen	Perceived helpfulness	Wellbeing	Age
Number of times patient was seen	1.000	-0.127 p=0.191	0.343* p<0.01	0.318* p<0.01	0.045 p=0.640
How long ago patient was seen		1.000	-0.264* p<0.01	-0.029 p=0.752	-0.052 p=0.574
Perceived helpfulness			1.000	0.493* p<0.01	0.018 p=0.844
Wellbeing				1.000	-0.070 p=0.488
Age					1.000

One further relationship identified was between gender and reported wellbeing: 70% of women reported an improvement in their wellbeing whereas just over half (55%) of men reported an improvement. This was particularly prominent in those reporting a major improvement in wellbeing; 36% of women but only 14% of men(Figure 2).

Figure 2: Perceived Changes in Wellbeing by Gender



Community Resources

CLWs were to signpost patients towards community resources where this was deemed appropriate. Respondents were asked whether the CLW suggested a resource to them, and 121 (95%) provided a response to this question. Three out of four respondents (n= 91) reported that a community resource had been suggested by the CLW. Of these 91, 55 (60%) reported contact with a community resource (Table 5). Overall, 55 out of 128 (43%) of patients reported contact with a community resource.

Table 5: Community resources utilised

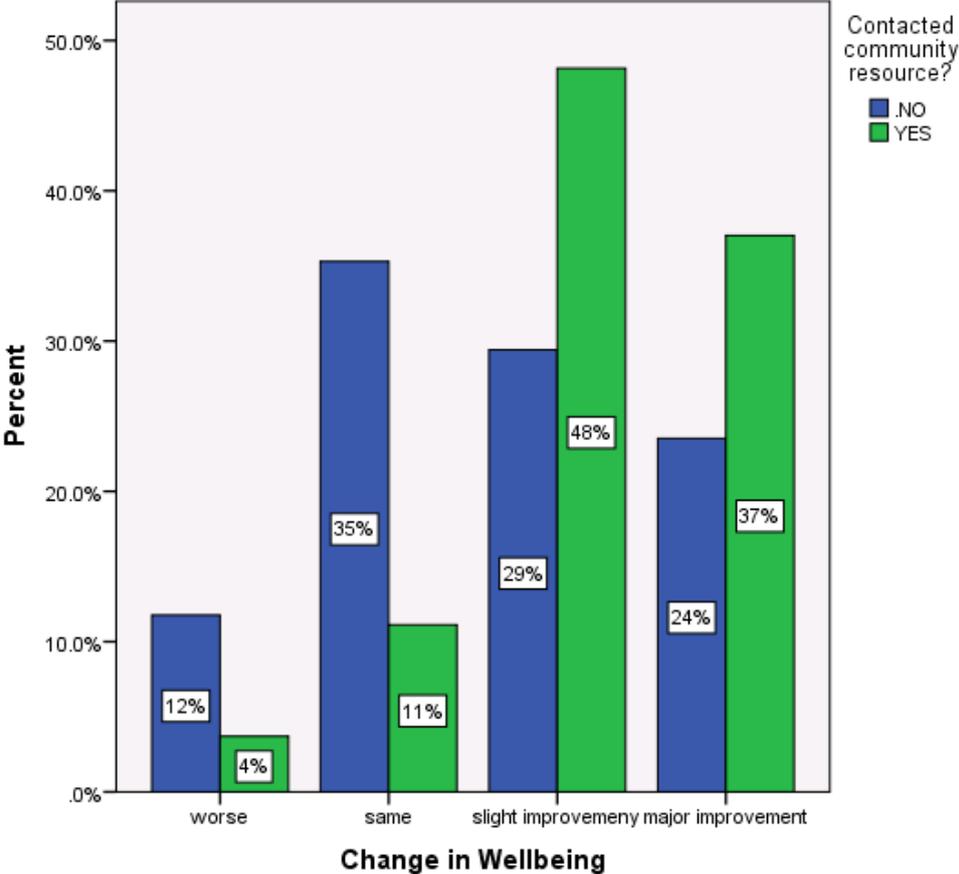
Community Resource Suggested	Frequency	Percentage
Yes	91	75.2
No	15	12.4
Can't Remember	15	12.4
Total	121	100
Community Resource Contacted	Frequency	Percentage
Yes	55	60.4
No	28	30.8
Can't Remember	8	8.8
Total	91	100

Community resource uptake was not statistically different between males and females (p=0.205).

There was no relationship between whether a patient contacted a community resource and number of

contacts with the CLW ($p=0.865$). The relationship between whether a patient contacted a community resource and reported change in wellbeing was examined by means of Spearman’s correlation. This found that patients who reported contact with a community resource also reported subsequent improvements in wellbeing ($\rho 0.329, p=0.001$). This relationship is also shown in Figure 3.

Figure 3: Relationship between wellbeing and contact with community resources



Regression Analysis

Step-wise linear regression analysis was carried out with wellbeing at the outcome (dependant variable) in order to examine whether the positive effects of seeing a CLW (number of times seen) and the positive effects of contacting a community resource were independently associated with improvement in wellbeing. Age, gender, deprivation, number of CLW contacts and whether community resource was contacted were entered into the model. The results showed that both contact with a community resource (standardised beta 0.308, $p= 0.005$) and number of contacts with a CLW (standardised beta 0.229, $p=0.036$) were both independent predictors of improved wellbeing. Age, gender and deprivation had no significant association with wellbeing.

Type and Number of Community Resources

A total of 42 community resources were identified. These were both specific named resources and generalised services available in the community. Most were only reported by one individual however Life Link was noted a total of six times (Table 6).

Table 6: Specific Community Resourced Utilised

Resource	Frequency	Resource	Frequency
1. Age Concern	1	22. Library – project work	1
2. Amosa	1	23. Life Link (Counselling and home help services)	6
3. Cancer bereavement counselling	1	24. Local church group	1
4. Carer's emergency plan	1	25. MacMillan Cancer Trust	2
5. Carer's helpline	1	26. Money Matters	1
6. Citizen's Advice Bureau	2	27. Northwest Community Addiction Team	1
7. Community Alarm	1	28. PETAL Support Centre	1
8. Computer Course	2	29. Physiotherapist	1
9. Contact the Elderly	1	30. Plantation Productions	1
10. Counselling services	1	31. Possil Park Disabled Centre	1
11. Doctor's surgery	1	32. Preshal Trust Community Centre	2
12. FASS (Family Addiction Support Services)	2	33. Relaxation classes	1
13. Finding a Voice	1	34. Shawpark Mental Health Resource Centre	1
14. GAMH (Glasgow Ass. for Mental Health)	1	35. Social work for carers	1
15. GCA (Glasgow Council on Alcohol)	1	36. Southwest Glasgow Carer's Centre	1
16. Glasgow Rhythms	1	37. Stress management services	1
17. Gym services	1	38. The Daffodil Club	1
18. Health centre	1	39. The DWP (Department for Work and Pensions)	1
19. Home Start	1	40. The Pearce Institute	1
20. Homeless shelter	1	41. Tune Speak	1
21. Housing and social worker	1	42. Walking groups	3

Breaking down these resources by type, 11 subtypes could be found. Some resources fitted into two of the categories so were given a tally in each category, increasing the total to 52 (Table 7). The biggest single category was mental health, accounting for over one-third of resources.

Table 7: Community Resource by Type

Resource Type	Frequency	Percentage
Mental Health	19	36.5
Addiction	4	7.7
Medical Condition	4	7.7
Disability	1	1.9
Carer	5	9.6
Ageing	2	3.8
Housing	4	7.7
Finance	5	9.6
Exercise	5	9.6
Music	1	1.9
IT	2	3.8
Total	52	100

4. DISCUSSION

Key Findings

An audit questionnaire was sent to 551 patients referred to CLW during the first 11 months of the programme (April 2014-March 2015), and 125 (23%) patients replied. Respondents did not differ significantly from non-respondents in terms of gender (60% were female) or deprivation (approximately 80% were in the top quintile of deprivation) but were somewhat older (although there was a high level of missing values for non-respondents). The reported number of contacts with the CLW averaged 3.4 per patients, and 55% reported more than three contacts. Two-thirds of patients reported that they found contact with the CLW helpful, and 60% reported some improvement in wellbeing (25% reporting a major improvement). Women reported a higher improvement than men.

The improvement in wellbeing was positively related to the number of times seen by the CLW. Three out of four patients reported that the CLW had suggested a community resource, and 60% of these reported making contact. Overall therefore, 43% of the total number of respondents reported making contact with a community resource. Contact with a community resource was positively related to improvement in wellbeing. There were 42 community resources listed by the respondents; mental health support was the commonest type of resource listed (36.5%).

Relationship to Published Literature and Previous Work

There is limited evidence on the role of link workers in areas of high deprivation. A review of the literature on social prescribing, which include the NHS publication Social Prescribing in Mental Health [13], identified three areas that social prescribing could influence; the determinants of mental wellbeing, low intensity early interventions and the mitigation of risk factors in on-going mental health problems [14]. The present audit did not contain specific measures of mental health outcomes, but community resources relating to mental health was the single commonest type reported.

In relation to links worker schemes, seven studies were identified from a scoping review on the effectiveness of linking schemes in the community [15]. The review found that the greatest results were seen in psychosocial issues as the linking schemes helped to “counteract the negative impact of long-term conditions on people’s social lives.” The target population predominately featured patients with long-term conditions but many were also suffering from mental health problems, social isolation and those who were considered frequent users of primary care. Two studies found a positive impact on mental health and psychological outcomes [16,17] and three studies found some positive impact on aspects of social isolation and loneliness [18-20]. One study found no statistical difference in the

change to “social contact, perceived loneliness or morale” at follow up [21]. A second review of the literature noted that many of the studies were uncontrolled before and after data studies and thus had the potential for bias [22]. This University of York review concluded that there is insufficient good evidence to inform the commissioning of a social prescribing programme as the overall success or value for money has not yet been evaluated comprehensively.

In the present audit, women reported greater improvement in wellbeing than men. There was no statistical difference in percentages of men and women contacting resources. However, without fuller information on the type and duration of problems being addressed it is hard to explain this gender difference. Further evaluation may help answer this finding.

Strengths and Weaknesses

The questionnaire was sent to a large number of patients seen by the CLWs in the first 11 months of the programme. Although the response rate was low (less than one in four replied), this was to be expected given that there was no attempt to boost response rates by reminders or telephone messages. This was a deliberate strategy as one aim of the audit was to see how feasible it would be for Practices to collect such information in the future, without the help of a research team. The fact that respondents were similar to non-respondents in terms of gender and deprivation is encouraging, and the age difference may or may not be valid (given the high level of missing data in the non-respondents). However, it is possible that those who felt more involved or had better outcomes from seeing their CLW were more likely to return the questionnaire, thus potentially skewing the results due to sample bias.

The questionnaire covered patient perception of the CLW contact and seemed to work well. The questionnaire was very short and easy to fill out as it was composed predominantly of short simple sentences and tick boxes. This is reflected in the generally very low level of missing data.

The statistical analysis was largely descriptive. Linear regression analysis did not take account of any cluster effects of patients, CLWs and practices. Thus the findings should be treated with some caution.

Implications for Practices

From this evaluation it can be seen that patients generally responded positively to the CLW Programme. The current report has not analysed practice level results but this will be done in due course and fed back to each practice. It would certainly be feasible for practices to conduct their own future audits using the same questionnaire, although it is not clear if such a low response rate would make this a meaningful exercise.

5. CONCLUSIONS

Caution is required in the interpretation of the findings of this current audit of the Glasgow 'Deep End' Links Worker Programme, given the low response rate. Clearly the CLW programme is reaching patients in the top 20% of deprivation, and the findings suggest that most patients who are seen by a CLW feel that it has been helpful and most report a subsequent improvement in wellbeing. This perceived improvement is related to both the number of contacts with a CLW (which averaged between three and four) and with contact with community resources. Both effects appear to operate independently. Thus referral to a CLW clearly is not a simple signposting exercise, in which patients are rapidly assessed and connected with the relevant community resource. However, it is important to emphasise that on the available data, CLWs do not seem to be taking on the role of long-term support workers. Indeed, it is likely that CLWs are adopting a pragmatic 'generalist' approach by combining 'linking' and 'fixing' functions flexibly depending on the patients' needs and wishes.

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