



Final Report

SPICE TIME CREDITS SOCIAL PRESCRIBING PILOT EVALUATION

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BACKGROUND AND CONTEXT

Demand for healthcare is increasing globally. In times of austerity the Welsh health and care system is struggling to balance increased demands with reduced expenditure [1]. The health and social care budget in Wales is almost 50% of the devolved budget [2]. In Wales, people aged 65 and over are projected to increase by 37% in the next 20 years [3], with the highest rates of long-term limiting illness in the UK, the most expensive facet of NHS care [4], there is a more prescribed medication in deprived areas coupled with a higher prevalence for mental health problems [5] and primary care is also in crisis, with up to a third of GPs wanting to leave the profession [6].

Around 20% of patients consult their GP for psychosocial problems [7]. It has been argued that psychosocial issues and long-term conditions can be better managed in the community [8]. Social prescribing is 'A mechanism for linking patients with non-medical sources of support within the community' [9] which can offer an alternative to the traditional medical models and reduce the burden on the NHS.

Despite universal access to health services, poor health remains linked to social and economic disadvantage resulting in health inequalities [10,11]. Reducing health inequalities is a key priority for Welsh Government [12]. Linking with communities is a way to respond to this. Community activities can improve social capital and reduce isolation [13]. Increased levels of community and social participation has a positive impact on health behaviours, physical and emotional health and self-confidence, especially among disadvantaged populations [14]. NICE guidance endorses community engagement as a strategy for health improvement [15].

POLICY & LEGISLATIVE CONTEXT

The Welsh Government has put in place legislation, the Well-being of Future Generations (Wales) 2015 and Social Services and Well-being (Wales) 2014 Acts and a National Primary Care Plan, recognising the role of non-clinical support as a key part of a social model of health and well-being. There is currently under development a social prescribing pilot scheme aiming to improve the mental health support available to people with low to moderate mental health issues which Welsh government are committed to delivering.

SOCIAL PRESCRIBING

Social Prescribing can be for a range of activities e.g. arts, leisure, education, stress management, and volunteering. Accessing a broad range of community-based services can help patients self-manage long-term chronic conditions and reduce health inequalities particularly for vulnerable and socially deprived groups who face barriers to accessing appropriate health services [16,17]. Benefits for patients accessing social prescribing include; increased self-esteem, confidence, sense of control, empowerment, improved psychological, mental well-being and mood and reduced symptoms of anxiety and depression.

Further benefits include reducing the inappropriate prescribing of antidepressants. Patients can become more active in managing their conditions resulting in less reliance on the NHS, particularly for marginalised groups such as mental health service-users and older adults at risk of social isolation [18,19].

VOLUNTEERING

Volunteering also has a range of psychological benefits; enhancing social support and social integration, and improved feelings of well-being [19,20,21]. In addition, by supporting others this can improve social connectedness, boost self-efficacy and mood [22,23,24], which in turn reduces psychological stress, enhances physical well-being and self-reported health and happiness [25]. Volunteering has been suggested as an intervention to improve health, although much of the research has been done with older adults, who are more affluent with more exposure, and easier access to, volunteering opportunities [26].

INNOVATE TO SAVE

Innovate to Save (I2S) is funded by Welsh Government developed and delivered by Y Lab (a public service innovation lab, run in partnership by Cardiff University and Nesta). The I2S fund provides financial and non-financial support to Welsh public services to prototype and test innovations to improve services. The I2S fund operates alongside the Welsh Government Invest to Save fund, a repayable, interest-free, loan which successful I2S projects can apply for.

Fifty applications were received for I2S, twelve of these involved SP across Wales. Eight projects were selected from the two stage (application & interview) process. Of these two were social prescribing pilots in primary care supported by Cardiff and Vale Health Board (CVHB) and its South West Cardiff (SWC) GP Clusters, one of which is SPICE time credits.

The I2S programme provided £15K seed funding for SPICE to trial and test a ‘Time Credit Social Prescription Model’ for patients presenting with low level anxiety and depression across 3 GP surgeries (Ely Bridge, Llandaff Fields and Lansdowne) in the SWC GP Cluster. The trial ran from 15th Sep 2017 until 31st Jan 2018.

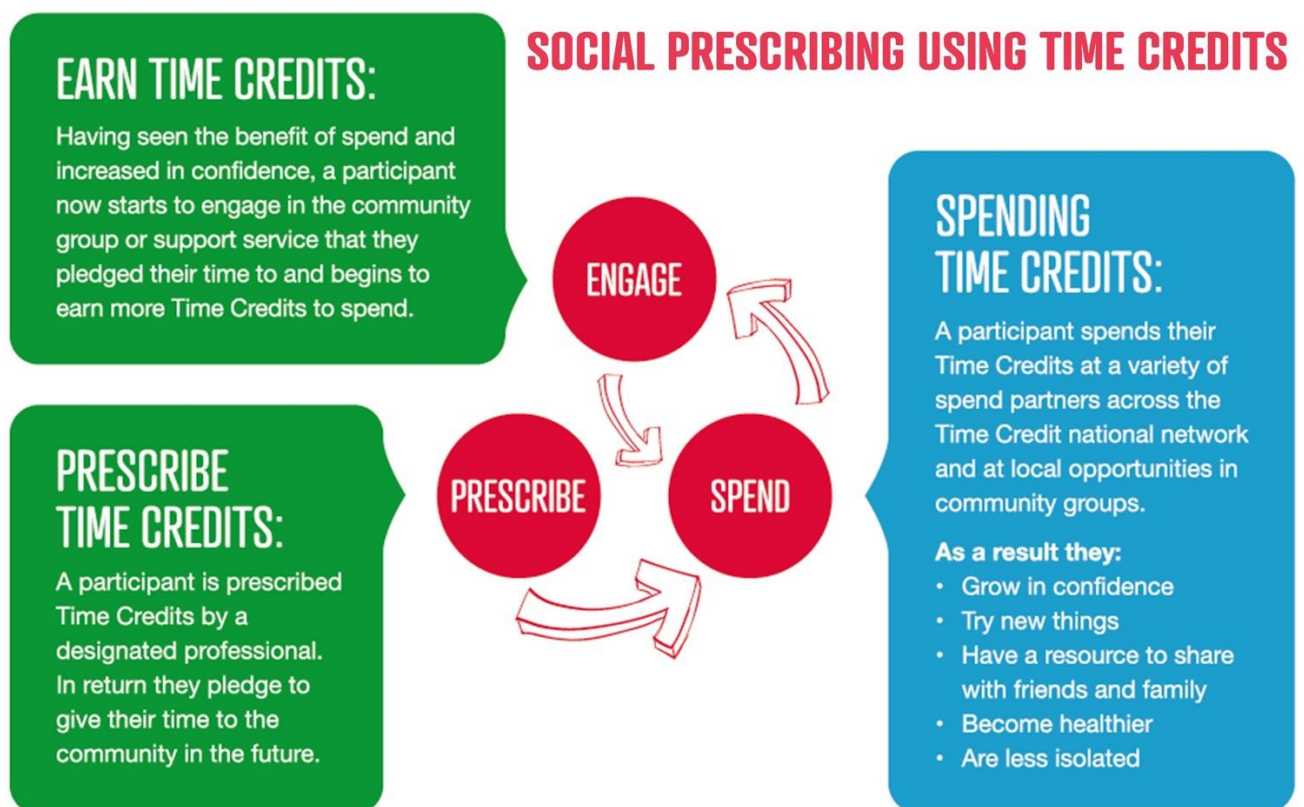
SPICE is a social enterprise founded in the Rhondda Valley in 2009 and connects communities using time credits a community currency. Time credits is an adaptation of the time banking model [27], a framework for giving and receiving services in exchange for units of time. One hour of time helping another member of the network equals one time-unit which can be spent for services [28]. The underlying theories are reciprocity, [29] and equity [30]. Participants are encouraged to spend as well as earn time units, and everyone’s time is valued equally [31].

SPICE uses time credits as a way of recognising people for volunteering. The individual participants volunteer in a local organisation of their choice i.e. a community, volunteer group or a statutory sector service provider. In exchange for their contribution, they ‘earn’ printed time credit notes, one for every hour they give, which they can then ‘spend’ on a range of leisure and other opportunities donated by organisations, or those in the time credits network. They can also be spent on activities run by other community members or at the organisation/group they were earned with [32,33]. A recent review of SPICE time credit schemes found that it improved physical activity, social connectedness, sense of purpose, skills, pathways to employment and reduced loneliness. Effects were particularly strong for ‘non-traditional volunteers’ those who have little or no history of volunteering, are unemployed or on very low incomes, on benefits and have long-term physical and mental health issues [34].

SOCIAL PRESCRIBING TIME CREDIT MODEL

In the 'Social Prescribing Time Credit Model' (Fig 1) patients and community members are 'prescribed' a small number of TC by the social prescriber(s) based in the GP practice(s) pledging their time to earn in the future. This enables them to immediately access a wide range of activities that they are interested in, spending time credits, and to identify a way they can play a positive role in the community through earning by volunteering. This supports the voluntary sector to work with increased numbers of patients signposted via social prescribing.

FIG 1: TIME CREDIT PROCESS



EVALUATION

A mixed methods evaluation of the SPICE Time Credit Social Prescribing Pilot was undertaken. Data was collected and provided by the project team and submitted to the research team (Dr Ceri Jones and Dr Mary Lynch for analysis). This data included:

Qualitative data:

1. Anonymised sets of patient notes taken by the social prescriber at each appointment
2. Monthly reflective diaries
3. Two further semi-structured interviews were conducted by the researcher with the social prescribers and a focus group with practice staff at one GP practice in the pilot

Quantitative data:

1. Pre (T1) and post (T2) Edinburgh and Warwick Wellbeing Scales – collected by the social prescribers (anonymised with coded unique patient numbers).
2. Data for each patient 12 months prior to intervention and at the end of the pilot from the GP Vision system (anonymised with unique patient numbers) on:
 - a. GP appointments
 - b. Current condition
 - c. Medication use
 - d. Unplanned hospital admissions

THEMATIC ANALYSIS OF INTERVIEWS AND FOCUS GROUPS

One focus group was conducted with 12 practice staff, from one of the GP's involved in the study and two semi-structured interviews with the social prescribers. These were anonymised and transcribed verbatim. On monthly basis two members of the project team completed a reflective diary. Sixteen were completed in total. These sources of qualitative data were thematically analysed.

RESULTS

A number of consistent themes were identified across the different qualitative data sources these are as follows:

1. COMPLEX AND CHALLENGING PATIENT REFERRALS

The patients referred through to the social prescribers had very complex issues, these were often frequent attenders, patients with suicidal ideation, complex social and housing issues, childhood trauma, sexual or domestic abuse.

“I was very surprised at the high level of need and complexity of issues that were brought through the door to be honest.... The first patient I saw was ...she was escaping a very long term violent and sexually abusive relationship...she'd been sexually, physically abused for so many years.... and that was the first person I ever saw... As well as that I'd say there was a number, there was probably about three or four people who raised concerns of suicide and passed onto the appropriate people as well who doing the session said I don't want to be here anymore, those type of things, I've thought about this kind of thing in the, I've been suicidal in the past and I'm worried, I'm starting to feel like that again and those type of issues which again was quite shocking

and surprising. I'll tell you there was at least two or three people as well who said they'd been diagnosed and were struggling with things like PTSD”

“We did identify a list of patients who we call frequent flyers. They come to the surgery very often and we thought that that was a really good starting point to refer them in?”

“she was a lady who I had to see I think it was four or five times before I actually got her to take some time credits off me and during that period I'd had to refer her back to the GP because I was worried about her killing herself”

1.1. SOCIAL PRESCRIBER COMPETENCE AND CONFIDENCE

Due to the complexity of the patients and the high level of emotionality and distress the social prescribers were presented with this left them feeling overwhelmed and finding it difficult to cope. This had a spill over effect into other aspects of their life. More supervision and training for dealing with these patients was needed.

“I think the biggest one for me would have been appropriate supervision....I found it hard at times ...and I'm quite, like I said, I'm quite experienced with a lot of the issues as well even though I'm not the, a counsellor or whatever, but I found it really hard and when I said about that, one of those last days when we had all those people in a row it was like a misery train because everyone was in a hell of a state”

“A significant number of patients in our cohort had adverse mental health. This ranged from low level anxiety, depression and stress to PTSD, bipolar disorder, psychosis, self-harm and suicidal thoughts. A number of these patients had been discharged from secondary and tertiary mental health facilities without having made a full recovery. The social prescriber needs knowledge and skills to deal with these patients, and needs to understand their limitations and criteria for onward referral. A number of patients also reported domestic abuse. Again, the social prescriber needs knowledge and skills to deal with these patients, and understand the referral pathways in the cluster.”

“There have been several ‘red-flag’ situations with patients mentioning issues such as suicidal thoughts. Passing this information on promptly and to the correct member of surgery staff was not as easy as we would have liked....I attended my first group supervision session at the beginning of the month. I found this quite useful as I have been exposed to a plethora of complex issues and negative emotion. Although I feel that I am coping in the short term, I raised the concern that it may be affecting other areas of my life, such as at home.”

2. SUITABILITY OF TIME CREDITS AS AN INTERVENTION

There was acknowledgement that time credits might not be a suitable intervention particularly for the complex patients. It was particularly difficult to prescribe time credits for these patients, some were not willing to engage with the conversation, while some were suspicious that this was some-how an intervention to get them back to work. There was a lack of understanding of the time credits model by GP's and Practice staff leading to lower referral than anticipated.

“social prescribing needs a lot of different tools for behavioural change. Time credits can be one of those tools but are only suitable for a small minority of patients.”

“when I would bring it back through well alright you’ve found something that you enjoy or you used to enjoy, how can we use time credits to make that happen for you and it was a bit of a stretch sometimes bringing it back to the time credits in this situation I’ve got to admit. Sometimes it was obvious as in like well do you know what I used to swim and that’s an actual example and I used to love swimming and I never go anymore, that’s bingo from his point of view, that’s an easy win but other people it’s a real struggle and there’s so much complexity and that going on that needs to be really addressed first”

“Do you know if you mention time credits as well they’ll cut you dead. You’re okay, you’re speaking to them, and as soon as they say oh such and such time credits, oh I’m not interested in that, that seems to stop them dead, the credits.”

“I am seeing more and more patients for whom time credits are unsuitable. Either patients have no interest at all or the nature or acuity of the situation make them unsuitable.”

2.1. LACK OF PATIENT ENGAGEMENT WITH TIME CREDITS

Of those patients who were prescribed time credits very few spent them, some patients found it a huge challenge to overcome their anxiety to access the time credit network.

“I think X said single mums were using the time credits more than using it ... so they could use it for playgroups and taking their children out. I think it was more effective with that group.”

“About half of the patients refused to accept time credit notes for spending. The most common reactions were: “My problems are not going to go away because I go out for an hour or two”, “If I thought anything in this brochure would be of any help to me, I would have started doing it a long time ago”, “I am here because I am stressed, have too much to do and no time to do it - how is it helping me to give me even more to do?”. People with anxiety frequently pointed out that the time credits were useless to them as they could not make use of spending opportunities because of their anxiety and needed help with that first. People with depression, low mood and/or anhedonia frequently said they had no interest in going out and did not enjoy any activities, and time credits were not going to change that.”

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2.2. INADEQUATE TIME CREDIT NETWORK AND INFRASTRUCTURE

For those patients who did express an interest in time credits and their preference for spending them and earning them back there wasn’t enough organisations in the network that

met the patient's preferences. A lack of online platform and toolkit to support the social prescribers exacerbated the problem of knowing what patients could and couldn't access.

“For the first three months of the pilot, the only earning opportunity was a community garden. When, four months into the pilot, a list of earning opportunities was provided, there were still only 18 opportunities. Most of those were with recovery services, and a few were earning opportunities with Spice that were either one-offs (helping out at promotion events), specialised (IT) or solitary (making cards). For the handful of patients who were interested in volunteering, the low number of volunteering opportunities and low choice in the Spice network proved a large barrier.”

3. UPTAKE AND ENGAGEMENT

There was varying levels of engagement and uptake across the GP practices involved in the project. Some GP's were more engaged than others and referend more patients through to the social prescribers. The project team did a lot of engagement with practice staff at the beginning of the project. Engagement increased referrals but then this waned and further engagement was needed. An active social prescriber presence in the GP practices and engagement with GPs and Practice staff increased referrals but GP's in particular were more difficult to engage with.

“We'd want more people to take it up because sometimes her list looks quite pathetic doesn't it, when ...X came in last week and had one person”

“Due to low referral numbers from X surgery, we have experimented with sharing practices However, after doing this, referrals at X have diminished to almost zero. As well as this, referrals and attendance at X continue to be erratic. It feels very much like 'you are damned if you do and damned if you don't'.”

3.1. PATIENT ENGAGEMENT

Some patients didn't like the term social prescriber which proved a barrier for referral, so in some practices the social prescriber was referred to as a wellbeing co-ordinator. Patients were more likely to attend the sessions if they were referred directly by the GP rather than practice receptionists. Patients only engaged until their issues were addressed so this meant that it was difficult for the whole 'time credit cycle' to be completed.

“if the doctors refer them because I think they're more likely to go with them rather than me referring them.”

“Patients present to the social prescribing service for a specific reason, and they generally engage with the social prescriber for the time it takes to address this reason. E.g. someone with anxiety will use the prescribed time credits to access a mindfulness workshop. At that point, whether the intervention has worked or not, they will generally stop engaging with the social prescriber. In order to bring patients to the volunteering stage, the relationship with the social prescriber needs to be more durable, which is difficult to achieve in the setting of primary care, where patients typically disengage after the reason for referral has been addressed.”

“They all seem enthusiastic at the beginning and then all of a sudden it can go sick doesn't it? And they'll say oh we're not going back or you know.”

4. DIFFERING APPROACHES TO SOCIAL PRESCRIBING

The two social prescribers had different backgrounds, skills and qualifications. One was medically trained and the other from a community support background. Their approaches to social prescribing were very different with one using a person-centred approach, choosing not to prescribe time credits for the majority of complex patients. The second social prescriber was focused on prescribing the time credits as set out in the original model, with a focus on guiding the patients to use and access the time credits network.

“I think motivational and solution focused stuff is a must. That would make a big. I think the solution focused stuff is probably what I use the most”

“Because of her background. She's a very caring person as well isn't she? And she's been fantastic at signposting people different places and recognised very early on that a lot of patients' need were very complex really. Where X who was doing social prescribing on behalf of X I felt was literally only offering time credits for volunteering and if ... that's as far as it went really. I don't feel that he offered anything else.”

‘I don't necessarily think that you have to have a medical background but to have some sort of caring background. People that have worked in health service for a long time and ... as opposed to people trying to sell time credits who have no sort of caring background if you like.’

5. GAPS AND BARRIERS

A number of gaps and barriers were identified. One of these was there was a need for further training support and supervision for social prescribers. More time was needed to run the intervention to understand the impact on patients and to allow the time credits to be spent and earned back. A further challenge was that the social prescribers were not employed by the GP Practice, therefore couldn't access the IT system, diaries, leading to overbooking or under booking of appointments and poor communication of annual leave, leading to patients arriving to attend appointments that hadn't been cancelled.

“I don't think, for this type and maybe for the other projects it was enough time to show we're honest, but for this not in a million years...you need a lot longer I think...I would imagine at least a year”

“Second is with regards to engaging with the GP practices and surgeries. I wouldn't do this again unless we had access to the GP's systems. Mainly around appointment booking and knowing what was going on. We were totally at the mercy of other people, not just the logistical side about coding things and what not”

“I saw more new patients than I'd seen for the rest of the project and the one day not only had, they booked in seven people in the morning I think, right for twenty minute slots and they were first appointments as well which are supposed to be forty minutes, an hour and I was just banging these patients like it was like a meat market ...each one of them crying and upset and then me having to go I'm really sorry, I've got somebody else not ideal and something as simple as if we'd had access to manage our own calendars it wouldn't have happened.”

6. POSITIVE OUTCOMES

The social prescribing project did have some positive outcomes for patients and GP practices. Whilst the social prescribing consultations remained confidential, practice staff had noticed some patients were making less GP appointments and calling the practice less. Patients seemed positive about the service and some shared that this had had a positive impact on their personal lives. However, the social prescribing did increase the workload of the receptionists and practice managers who had to do more administration booking patients in and recording information on the system.

“I know one, the one that was being abused by her husband, she's left him.”

“they'll come and say I really enjoyed it, as though they expect not to enjoy it.”

“So for instance the lady who I mentioned, one of the first patients I'd ever seen, we sent her in the right direction, she managed to get a job, she managed to get herself her own house.”

“I think it's shown a need for social prescribing, a role in primary care, definitely.”

“It's more work for us though...Making appointments, phoning them to confirm that they will be attending.”

“One of our patients has been referred, she definitely comes to us less... Yeah she's here two or three times a week maybe, or on the phone two or three times a week and that's definitely gone down...half, maybe half”

CONCLUSIONS

Results suggest that a large number of the patients referred through to the social prescriber had complex needs and were identified as frequent attenders by the GP's and practice staff. This presented some challenges to the social prescribers in terms of how to deal with these patients, it was deemed that time credits weren't the most appropriate intervention for these patients as they either weren't interested or struggled to engage. Further challenges were presented in the social prescribers' confidence and competence in dealing with these patients, particularly those expressing suicidal ideation and robust red flag and referral processes need to be in place as well as appropriate training and supervision of the social prescribers.

The approaches that the social prescribers took to conducting the social prescribing appointments differed quite considerably, with one focusing on the time credits as the intervention and the other focusing on a much more person-centred approach only offering time credits if they felt it appropriate. As this is a pilot study this presents some useful learning but does bring into question the fidelity of the intervention. Further barriers were the engagement of the GP practices to refer patients through and the lack of control social prescribers had over booking appointments and access to the GP system. This was compounded by a lack of variety of opportunities in the time credits network for patients to earn back time credits therefore fulfilling the whole 'time credit cycle'. Despite this staff in the GP practice felt it was a useful intervention for staff and patients and whilst not being part to the social prescribing consultations themselves could give examples of patients who it had benefited and where their appointments with the GP and calls to the surgery had reduced.

FREQUENT ATTENDERS

Research has suggested that the top 3% of Frequent Attenders (FA's) in primary care, account for 15% of all GP face to face consultations [35]. Five times as many prescriptions are generated for FA's when compared to less frequent attenders [36]. There is no clear definition of FA's in primary care. Some studies defined FA's as the top 3% to 10% of patient appointments per patient compared to the practice average, whilst others are defined by the number of appointments per year per patient. Reviews of FA's have found that while only one in seven FA's over a 12-month period continue to be FA in the following year, if frequent attendance that extends over 2 years it often continues for another year [37]. The level of frequent attendance varies from practice to practice, but most FAs consult all GP's in the practice, so a practice-based approach is needed to reduce the frequency of these consultations [38].

Research has given us insight into what issues FA's present to the GP practices with, data suggests they consult with medically appropriate problems at the same rate as comparative groups of patients (same age and gender) but they consult more often for other problems such as somatic symptoms (such as medically unexplained symptoms, chronic widespread body pain or back pain) [39], and mental health disorders such as anxiety and depression [40,41,42,43,44, 45,46,47,48] They often present with other deep rooted psychological issues from childhood including a history of childhood neglect or abuse and childhood illness exposure either in themselves or close family members [49]. FA's are less coherent [50] and have more health anxiety and hypochondriacal beliefs when compared to average attenders [51,52]

Health anxiety is a common explanation for increased health care seeking behaviour or frequent attendance [53,54,55,56,57]. This can sometimes arise from previous family or personal experience of significant health problems that were not primarily diagnosed correctly or managed in the best way. Physical symptoms can manifest from health anxiety such as increased muscle tension which can lead to pain and increased levels of the stress hormone, cortisol and autonomic overactivity which can in turn increase symptoms such as fatigue, palpitations, breathlessness, faintness and diarrhoea [58].

Another prominent theory for frequent attendance is somatisation, this is the presence of somatic symptoms which cannot be sufficiently explained by organic findings [59]. Patients presenting with somatisation often hold negative views on social, emotional mental health issues as a personal failing or weakness seeing it as their own responsibility to rectify rather than an issue for the health and care services. The somatisation presentation of physical symptoms may be a self-protective mechanism to avoid being blamed or not believed especially if this trust in authorities has been broken in the past i.e. being abused but not being believed or helped when this was disclosed [60,61]. This part of the evaluation explores the presenting issues of FA's referred to two social prescribers based across three GP practices by analysing the social prescriber's consultation notes.

METHOD

The two social prescribers in the SPICE time credits social prescribing project saw 78 patients in total over the 5-month pilot. Upon each consultation the social prescribers used a predesigned proforma on which notes were made on the social prescribers' assessment of patients presenting issues, whether they had concerns in relation to the patients these were

classified as red flags (and referred onto the appropriate referral pathways/services in the GP practice) the general discussion with patients and the plan put in place.

PARTICIPANTS

From the cohort of 78 patients 21 of these were identified as Frequent Attenders (FA). The data was not available for the mean number of appointments of patients for each of the 3 surgeries in the study, therefore the frequency of appointments per patients per year was used as the unit of analysis. FA's were classified as those who had more than 15 appointments over the 12-month period prior to the intervention [62].

The qualitative social prescriber notes for each of these patients (n=21) was anonymised by the social prescribers and coded and analysed thematically by the researcher, to understand the presenting issues and the background and context of the patients. Ages ranges from 18 to 83 with a mean age of 51. 14% (n=3) Male 86% (n=18) Female.

RESULTS

TABLE 1: THEMATIC ANALYSIS OF FA'S PRESENTING ISSUES

Number of patients	Primary issues	Secondary issues	Quotes
2	Substance Misuse	Chronic pain Dependant with ongoing health issues Depression and anxiety	<p><i>"Patient has been a long term intravenous drug user, primarily heroin. Has been on methadone programmes at various points in her life and is currently in receipt of a methadone script from X. Patient suffers with chronic pain in her leg/legs which impairs her mobility, resulting in the use of a walking stick. This is as a result of mistreated leg ulcers following repeated injection of substances" P1</i></p> <p><i>"Patient feels that the majority of her/their time is spent in the house; which leads to depression, anxiety and thoughts/intentions of substance abuse." P1</i></p> <p><i>"Patient has been using iv heroin and abusing alcohol for a long time. He has recently stopped using heroin but is still drinking heavily." P11</i></p>
6	Mental Health issues	Depression and Anxiety Insomnia Social Isolation/Loneliness Debt and financial issues Dependant(s) with health issues	<p><i>"She explained that she had been suffering from depression and anxiety issues for approximately 20 years" P3</i></p> <p><i>"Patient has had depression for 3 years.... She is on antidepressants" P5</i></p>

		<p>Suicidal Ideation Chronic pain</p>	<p><i>“Patient has got a history of mental health problems. She has been on antidepressants for a long time. She once took an intentional overdose during her marriage. She has also taken an unintentional overdose a few years ago. She also suffers from chronic pain in her leg.” P8</i></p> <p><i>“patient is struggling to cope...and is suffering from carer stress” P13</i></p> <p><i>“Patient has a history of depression. She has meals on wheels - “as she is too depressed to cook”.P16</i></p> <p><i>“Her GP has diagnosed her with bipolar disorder before New Year. She is on duloxetine.”P20</i></p>
5	Chronic Health Conditions	<p>Social Isolation/loneliness Depression and Anxiety Dependants with health issues Greif Chronic pain</p>	<p><i>“Patient is disabled...and has gone through a lengthy process to receive incapacity benefits. This was a very stressful process and she says she is completely stressed out now” P4</i></p> <p><i>“Patient is convinced that she has recurrent UTI with a diagnosis of interstitial cystitis and her focus on antibiotics, makes me think it may be because of (health) anxiety.”P6</i></p> <p><i>“Patient had a severe accident and suffered traumatic brain injury...requiring extensive rehab. She also has mental health issues that are in large part due to structural brain damage. She suffers mainly from depression but has had psychotic symptoms in the past. She has also self-harmed in the past.” P7</i></p> <p><i>“Patient has epilepsy that is badly controlled and he is on long term benefits because of this.” P10</i></p> <p><i>“Patient has got learning difficulties. She is on disability benefits. She recently lost her mother with whom she was very close.”P17</i></p> <p><i>“Patient has fibromyalgia (on pain relief), chronic back problems (after epidural for childbirth 10 years ago), asthma...and mental health problems.</i></p>

			<i>She is on antidepressants. She is morbidly obese.”P18</i>
5	Abuse (Domestic or Sexual)	<p>Children in care/ residing elsewhere Depression and Anxiety Suicidal Ideation Loneliness and Isolation Cognitive Issues Substance misuse Self-Harm Housing instability Estranged family members Dependants with health issues Chronic pain Mental Health Issues</p>	<p><i>“She explained that due to a previously abusive relationship, she had for a long time been disowned by her family. She had 2 children from said relationship...who resided with her family elsewhere...she felt that thing has gotten too much, with her feeling suicidal and withdrawn.” P2</i></p> <p><i>“He says that a few years back, during his stay in X prison, somebody attacked him from behind, pulled a bag over his head and raped him. When he wanted to report it, the prison guard denied having heard or seen anything.” P12</i></p> <p><i>“they see her regularly anyway because of issues related to domestic abuse” P14</i></p> <p><i>“Patient suffers from depression. She went through.. sexual abuse at the age of 6” P15</i></p> <p><i>“Patient has mental health issues and PTSD after domestic violence (ex-husband was convicted to 18 years in prison).”P21</i></p>
2	Complex Grief	<p>Anxiety and depression Chronic pain Social Isolation/Loneliness</p>	<p><i>“Patient’s grandmother recently passed away and patient is still grieving for her.</i></p> <p><i>Patient’s mother has recently been diagnosed with terminal ovarian cancer and only has a few months to live.” P19</i></p> <p><i>“Patient lost her mother when she was 5 and her father when she was 9. Her father was an alcoholic and his children had to look after him.</i></p> <p><i>She had a happy marriage but her husband was diagnosed with cancer at the age of 50 and died 9 years ago. She describes him as her “rock” and has been feeling lonely since.”P20</i></p>

1	Social Issues	Housing instability	<i>“Patient presents with...friend. They both live together in sheltered accommodation.” P9</i>
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The analysis of the patients notes for those patients classified as FA’s showed that the patients presented with complex psychosocial, mental and physical health conditions. Two patients presented with substance misuse, 6 with mental health issues, 5 with chronic health issues, 5 with abuse (sexual or domestic), 2 with complex grief and 1 with social issues.

All of these patients had a number of issues that co-existed together such as domestic abuse, depression, housing instability and family issues. The issues presented whether primary or secondary showed commonality across patients. Some of these issues had been ongoing for a number of years, there were unresolved issues relating to childhood trauma and adverse childhood experiences. Sometimes these issues were not disclosed at the first appointment but at the second appointment when the patient felt more confident with the social prescriber particularly in relation to issues of physical and sexual abuse. Six of the patients were carers for dependants (children or partners) with mental and/or physical health conditions.

Three of the patients were classified as red flags by the social prescriber this is where they are at risk of harm from others or to themselves. One of these was perceived threat of harm from domestic violence; the other two were expression of self-harm or suicidal ideation. These patients were referred back to the GP by the social prescriber.

With a limited number the patients there was a discussion of the time credits scheme, and options to spend and earn back with only a few accepting the time credits given by the social prescriber. Almost all patients were referred to other services, these were either other statutory services such as, social services safe guarding teams, housing associations, or charities such as those that support mental health and domestic or sexual abuse. These referrals and signposting to other services, predominantly formed part of the ongoing plan with the patient.

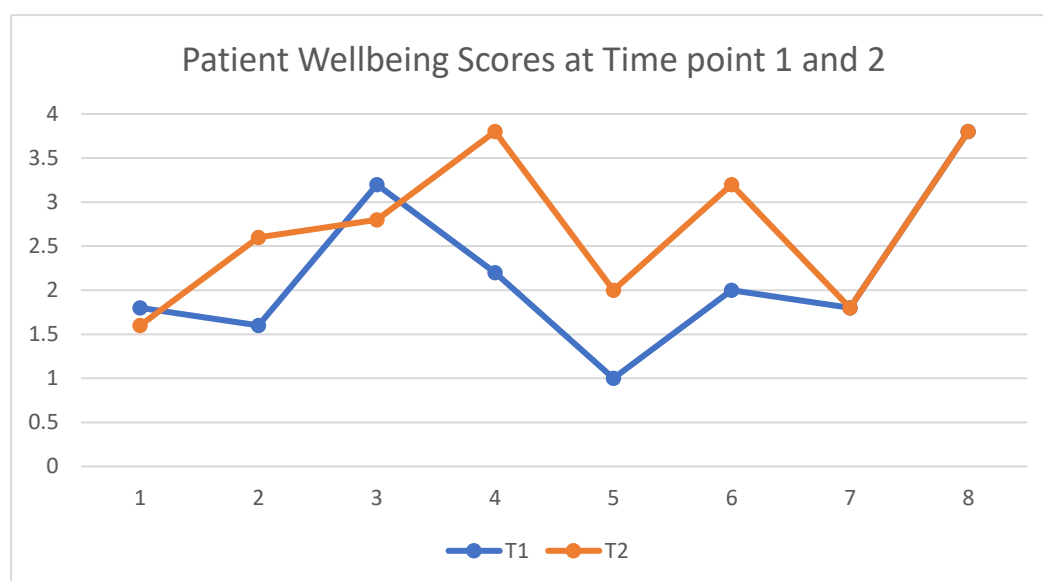
WELLBEING SCORES

At each appointment the social prescribers asked the patients to complete the Warwick Edinburgh, Mental Wellbeing Scale (WEMWBS). The WEMWBS was developed to enable the monitoring of mental wellbeing of projects and programmes aimed at improving mental wellbeing. This is a well validated measure of mental wellbeing. The 14-item scale with 5 response categories, worded positively to cover both feelings and functioning aspects of mental wellbeing. Forty-nine were completed in total (n=49) of these 11 were completed at T1 initial consultation and T2 follow up. Mean scores are presented in Table 2 and Graph 1. The higher the score the more positive responses.

TABLE 2: MEAN (WEMWBS) SCORES AT T1 AND T2

Mean Scores T1	Mean Scores T2
1.8	1.6
1.6	2.6
3.2	2.8
2.2	3.8
1	2
2	3.2
1.8	1.8
3.8	3.8

GRAPH 1: WEMWBS SCORES AT T1 AND T2



RESULTS

The results suggest that for those patients did complete a pre and post evaluation there was an overall improvement in their mean WEMWBS Scores. However, the number of patients (n=11) who completed the post evaluation was too small to do any meaningful statistical analysis on so it's difficult to make any assumptions about the effectiveness of the intervention for improving the mental wellbeing of patients. A larger sample of patients who complete the WEMWBS pre and post intervention is needed to test this theory.

ECONOMIC EVALUATION

The results provided are constructed from the SPICE pilot project with data available from three GP practices based in Cardiff, Wales. The data collected is based on a sample size of 78 individuals who participated in the SPICE Social Prescribing (SP) programme which was delivered over 5 months from September 2017 to end of January 2018 inclusive. The Health Economics evaluation analysis will be presented for the whole sample cohort (78 participants) and then by sub groups, frequent attenders (21 participants) as well as frequent non-attenders (53 participants). This approach will outline participant NHS service usage by health unit costs for GP consultations and dispensed prescriptions, along with variance in health unit usage and costs.

EVALUATION ANALYSIS PROVIDED ON PRE- AND POST-INTERVENTION DATA

When investigating presenting conditions, the largest proportion of participants over 33% were referred to the SPICE intervention due to low mood and isolation difficulties. The next significant referring condition was anxiety and associated social issues (31%) followed by depression and social difficulties (22%). The remaining mental health and wellbeing condition that participants were referred to the intervention presented with stress (14%) and associated social issues. Please see Table 3. Below.

TABLE 3: REFERRING CONDITIONS FOR PARTICIPANTS ON SPICE PROGRAMME OVER 5 MONTHS

Conditions by categories	N	Percentage
Anxiety and social issues	24	31%
Depression and social difficulties	17	22%
Low mood and isolation	27	33%
Stress and social issues	10	14%
Total	78	100%

The total number of GP appointments for the 78 participants prior to clients participating in the SPICE intervention was 979 appointments in the previous 12 months with an average of 12.55 appointments per participant or just over one GP appointment per month per participant. Following participation in the SPICE intervention, the total number of GP appointments for the 78 participants saw a slight decrease to 370 appointments. This equates to an average of 4.74 GP appointments per person over the five-month period or to less than one GP appointment per participant per month over the 5 months of the intervention. Projecting forward and converting these estimates into an annual rate would indicate 11.38 appointments and a reduction of just over 1.17 appointments per year per participant assuming the rate of healthcare usage continued for an entire year.

Following the intervention average monthly GP appointments attended by the 78 participants decreased by over 7 per month or a total of 91 GP appointments over a 12-month period. When examining the number of prescriptions dispensed pre- intervention and over the five months of the intervention. This equates to an average of 1.67 prescriptions dispensed per participant over 5 months of intervention or a reduction in the average monthly prescriptions issued by over two per month and by approximately 30 prescriptions per annum. Please see Table 4 below.

TABLE 4: GP APPOINTMENTS AND PRESCRIPTIONS DISPENSED PRE-SPICE INTERVENTION AND OVER 5 MONTHS OF THE INTERVENTION

	N	Total for 12 months pre-intervention for all participants	Total monthly average for all participants pre-intervention	Average per participant per annum pre-intervention	Total for all participants over 5 months of intervention	Average per participant over 5 months of intervention	Variance in healthcare unit usage
GP appointments	78	979	81.5	12.55	370	4.74	91
Prescriptions dispensed	78	342	28.5	4.38	130	1.67	30

Cost analysis pre-intervention and cost savings over the 5 months of intervention

There is a variance in the number of GP appointments pre- intervention and over the five months of the intervention with a reduction by 91 GP consultations per annum. This variance in GP sessions would have a projected saving of approximately £5,000 per annum when applying the suggested unit costings of GP cost per clinic consultation lasting 17.2 minutes equating to £53 [63]. When prescription dispensed is examined both pre- intervention and over the 5 months of the intervention there is a decrease overall in the number of prescriptions dispensed with associated cost savings of £1,290 per annum based on prescription costs per consultation (net ingredient cost) of £43 when applying the suggested unit costings [63]. When examining the cost variance when clients participate in the intervention there is a direct cost saving of £6,113 or £78.37 per participant over the five months of the intervention. Prior to the intervention costs associated with GP consultations and dispensing of prescriptions for the 78 participants was a total of £66,593 or £853.49 per participant per annum. Over the five months of the intervention, there is a reduction in the monthly average cost to £323 per participant for use of GP consultations and issuing of medication. The resulting change in client use of services equates to a reduction of cost by £6.51 per participant per month in costs leading to a reduction of £2,538.90 over the five months of the intervention. Based on unit of healthcare usage and projecting this variance and extrapolated over a 12-month period and all things been equal the likelihood of a reduction in unit usage and therefore associated cost by £78.20 per participant per annum or a total of £6,099.60 when compared with healthcare unit usage in the preceding 12-month period and resulting effects of participating in the SPICE intervention. Outline of costs shown in Table 5.

TABLE 5: COST ANALYSIS RESULTS FOR ENTIRE COHORT

	N	Total for 12 months pre-intervention for all participants	Total cost per annum pre-intervention for all participants	Total monthly average cost	Average per participant per annum	Average per participant per month	Cost for all participants over 5 months of intervention	Total monthly average cost	Average cost per participant over 5 months of intervention	Average cost per participant per month over 5 months of intervention	Projected costs per participant over 12 months post intervention
GP appointments	78	979	£51,887	£4,323	£665.15	£55.42	£19,610	£3,922	£251.22	£50.24	£602.92
Prescriptions dispensed	78	342	£14,706	£1,225	£188.34	£15.69	£5,590	£1,118	£71.81	£14.36	£172.34
Total	78	1,321	£66,593	£5,548	£853.49	£71.11	£25,200	£5,040	£323.03	£64.60	£775.26

* Average cost per participant per annum and average cost per participant over 5 months of intervention

* Average per participant per month and average cost per participant per month over 5 months of intervention

* Projected costs per participant over 12 months post intervention

FREQUENT ATTENDERS

Research evidence suggests that Frequent Attenders (FA) are in the 10% usage of primary care and use greater resources. Adhering to previous evidence that indicates that FA are individuals who would have on average 30 face to face GP consultations over 2 years [62]. Using this as a base line and applying this to the SPICE data it was consider that frequent attenders would be participants who had 15 or above GP appointments in a 12-month period. Based on these criteria 21 participants would be considered frequent attenders with a of minimum of 15 GP appointments in the previous 12 months prior to the intervention. Table 4 outlines the frequencies associated with this cohort of individuals in regard to face to face GP consultations and dispensed prescriptions over 12 months as well as over the 5 months of the intervention. The maximum number GP appointments by a participant was 54 appointments with an average of 25 face-to-face GP appointments in the previous 12 months.

TABLE 6: FREQUENT ATTENDER GP APPOINTMENTS AND PRESCRIPTIONS DISPENSED 12 MONTHS PRIOR TO INTERVENTION AND OVER 5 MONTHS OF THE INTERVENTION

	N	Minimum	Maximum	Mean
GP appointments	21	15	54	25.48
GP appointment over 5 months of intervention		0	49	7.57
Prescriptions dispensed	21	0	22	6.48
Prescriptions dispensed over 5 months of the intervention	21	0	6	1.86

The 21 frequent attenders had a total of 535 face-to-face GP consultations over the previous 12 months or a monthly average of 44 GP appointments or an average of just over 25 appointments for this cohort. Over the 5 months of the intervention, there was a reduction in the frequency of consultations to 159 and a monthly average of 7.57 face-to-face consultations per participant. This demonstrates a significant variance of a reduction by 153 face-to-face GP appointments over the 5 months of the SPICE intervention.

In addition, there was a reduction in the number of prescriptions dispensed from 147 in the previous 12 months to 39 for the 21 frequent attenders over the 5 months of the intervention. On average, this cohort had 1.86 prescriptions dispensed over the length of the intervention and a variance of 42 prescriptions dispensed.

TABLE 7: GP APPOINTMENTS AND PRESCRIPTIONS DISPENSED FOR FREQUENT ATTENDERS

	N	Total for 12 months pre-intervention for all FA	Total monthly average for all FA pre-intervention	Average per FA pre-intervention	Average per month per FA pre-intervention	Total for all FA over 5 months of intervention	Average per FA over 5 months of intervention	Average per month per FA post-intervention	Variance in healthcare unit usage
GP appointments	21	535	44.58	25.47	2.1	159	7.57	1.5	153
Prescriptions dispensed	21	147	11.33	6.48	.54	39	1.86	0.37	42

PRE-SPICE INTERVENTION AND OVER 5 MONTHS OF THE INTERVENTION

When looked at this cohort and the taking account of their referring condition 38% of participants were referred with experiencing anxiety and social issues, 21% suffer from chronic conditions and stress with 19% respectively experiencing, depression, social difficulties, low mood and isolation.

TABLE 8: REFERRING CONDITIONS FOR FREQUENT ATTENDER'S PARTICIPANTS ON SPICE PROGRAMME OVER 5 MONTHS

Conditions by categories	N	Percentage
Anxiety and social issues	8	38%
Depression and social difficulties	4	19%
Low mood and isolation	4	19%
Chronic conditions and stress	5	24%
Total	21	100%

Applying the recommended unit costings of GP cost per clinic consultation lasting 17.2 minutes which is £53 [63] this would suggest that the FA with the maximum number of consultations cost £2,862 in GP consultation costs in the previous 12 months. There is a variance in the number of GP appointments pre- intervention and over the five months of the intervention with a reduction of 153 GP consultations. This variance in GP sessions would have a projected cost difference of approximately £8,109 or £1,621.80 per month over the 5 months of the intervention.

When prescription dispensed is examined both pre- intervention and over the 5 months of the intervention there is a decrease overall in the number of prescriptions dispensed with associated cost difference of £1,677 based on prescription costs per consultation (net ingredient cost) of £43 when applying the suggested unit costings [63].

When examining the cost variance when clients participate in the intervention there is a direct cost saving of £8,109 or £77.22 per FA over the five months of the intervention. Prior to the intervention costs associated with GP consultations and dispensing of prescriptions for the 21 FA was a total of £34,676 or £1,393.89 per participant per annum.

Over the five months of the intervention, there is a reduction in the monthly average cost to £96 per FA for use of GP consultations and issuing of medication as outlined in Table 7. When monthly average healthcare usage costs are compared pre-intervention and on a monthly basis over the five months, there is a reduction of £41 approximately per month per FA. This reduction in health care usage and associated costs would suggest participating in the SPICE intervention had a substantial effect on healthcare usage and therefore costs among this subgroup of frequent attenders.

TABLE 10: COST ANALYSIS RESULTS PRE-INTERVENTION AND COST SAVINGS OVER THE 5 MONTHS OF INTERVENTION FOR FREQUENT ATTENDERS

	N	Total for 12 months pre-intervention for FA	Total cost per annum pre-intervention for FA	Total monthly average cost	Average per FA per annum	Average per FA per month	Cost for all FA over 5 months of intervention	Total monthly average cost	Average cost per FA over 5 months of intervention	Average cost per FA per month over 5 months of intervention	Projected costs per FA over 12 months post intervention
GP appointments	21	535	£28,355	£2,363	£1,350	£112.50	£8,427	£1,685.40	£401.28	£80.25	£963
Prescriptions dispensed	21	147	£6,321	£526.75	£301	£25.08	£1,677	£335.40	£79.85	£15.97	£191.64
Total	21	682	£34,676	£2,889.75	£1,651	£137.58	£9,786	£2,020.80	£481.13	£96.22	£1154.64

*Average cost per FA per annum and average cost per FA over 5 months of intervention

* Average per FA per month and average cost per FA per month and over 5 months of intervention

* Projected costs per FA over 12 months post intervention

Based on unit of healthcare usage and projecting this variance and extrapolated over a 12-month period and all things been equal the likelihood of a reduction in unit usage and therefore a reduction in associated cost to £1,154 per FA per annum when compared with costs per FA in the previous 12 months of £1,651 per annum per FA or a reduction of £497 per FA per annum. Subsequently if projected 12-month healthcare usage costs are compared with healthcare usage cost in the previous 12 months for all FA there is a reduction in healthcare unit usage with and effect on costs.

Therefore, should all things remain equal in the subsequent 12 months post intervention there is inferred cost difference, which is total cost for all FA over 12 months minus the projected healthcare usage cost in the next 12 months (£34,676 – £24,247 =£10,429). Although the costs are extrapolated to infer future healthcare usage and costs and if healthcare usage differed in the future based on change of healthcare usage while participating in the SPICE intervention it would be suggestive that the SPICE intervention

FREQUENT NON-ATTENDERS

This subgroup of the sample consisted of 57 participants and were classed, as the participants had less than 15 GP consultations in the previous 12 months. Participants presenting with anxiety and social issues as well as chronic conditions and stress were the main referring reasons as shown in Table 11.

TABLE 11: REFERRING CONDITIONS FOR FREQUENT NON-ATTENDER PARTICIPANTS ON SPICE PROGRAMME OVER 5 MONTHS

Conditions by categories	N	Percentage
Anxiety and social issues	15	27%
Depression and social difficulties	13	22.5%
Low mood and isolation	14	23.5%
Chronic conditions and stress	15	27%
Total	57	100%

The maximum number of GP appointments attended by a frequent non-attender was 14 face-to-face GP appointments and prescriptions dispensed in the previous 12 month with an average of 7.79 GP appointments and 3.61 prescriptions dispensed for participants in this sub group. Over the 5 months of the intervention, the average number of face-to-face GP consultations decreased to an average of 3.7 GP consultations and 1.60 prescriptions dispensed for participants in this sub group.

TABLE 12: FREQUENT NON-ATTENDER GP APPOINTMENTS AND PRESCRIPTIONS DISPENSED 12 MONTHS PRIOR TO INTERVENTION AND OVER 5 MONTHS OF THE INTERVENTION

	N	Minimum	Maximum	Mean
GP appointments	57	1	14	7.79
GP appointment over 5 months of intervention	57	0	10	3.7
Prescriptions dispensed	57	0	14	3.61
Prescriptions dispensed over 5 months of the intervention	57	0	5	1.60

This sub group of participants also demonstrated a difference in healthcare unit usage pre-intervention and over the 5 months of the intervention. Pre- intervention frequent non-attenders had 444 face to face GP consultations and 206 prescriptions dispensed in the 12 months prior to participating in the SPICE intervention as shown in Table 10 below. However, on closer examination of healthcare unit usage (GP consultations and prescriptions dispensed) per month for frequent non-attenders there is minimal variance in the average number of face-to-face GP consultations, average 0.65 per month per annum pre- intervention and 0.74 consultations per month over the 5 months of the intervention. Prescriptions dispensed pre- intervention and over the 5 months of the intervention remained static at 0.3 monthly average. Findings would suggest that the SPICE intervention did not impact on monthly healthcare unit usage among frequent non-attenders.

TABLE 12: GP APPOINTMENTS AND PRESCRIPTIONS DISPENSED FOR FREQUENT NON-ATTENDERS PRE-SPICE INTERVENTION AND OVER 5 MONTHS OF THE INTERVENTION

	N	Total for 12 months pre-intervention for frequent non-attenders	Total monthly average for frequent non-attenders pre-intervention	Average per frequent non-attender per annum pre-intervention	Average per frequent non-attender per month pre-intervention	Total for frequent non-attenders over 5 months of intervention	Average per frequent non-attender over 5 months of intervention	Average per frequent non-attender per month
GP appointments	57	444	37	7.8	0.65	211	3.7	0.74
Prescriptions dispensed	57	206	17	3.6	0.3	91	1.5	0.3

As with previous subgroups the standard cost matrix [63] for GP consultations and prescriptions dispensed was applied to examine the costs and cost effect outcomes for frequent non-attenders per intervention, over the 5 months of the intervention and extrapolated to reflect associated cost projects for the 12 months following the pilot intervention.

TABLE 13: COST ANALYSIS RESULTS PRE-INTERVENTION AND COST SAVINGS OVER THE 5 MONTHS OF INTERVENTION FOR FREQUENT NON-ATTENDERS

	N	Total for 12 months pre-intervention for frequent non-attender	Total cost per annum pre-intervention for frequent non-attender	Total monthly average cost	Average per frequent non-attender per annum	Average per frequent non-attender per month	Cost for all frequent non-attender over 5 months of intervention	Total monthly average cost	Average cost per frequent non-attender over 5 months of intervention	Average cost per frequent non-attender per month over 5 months of intervention	Projected costs per frequent non-attender over 12 months post intervention
GP appointments	57	444	£23,532	£1,961	£412.84	£34.40	£11,183	£2,236	£196.19	£39.23	£470.76
Prescriptions dispensed	57	206	£8,858	£738	£155.40	£12.95	£3,913	£335.40	£68.64	£13.72	£164.64
Total	57	646	£32,390	£2,699	£568.24	£47.35	£15,096	£2,020.80	£264.83	£53.44	£635.40

*Average cost per frequent non-attender per annum and average cost per frequent non-attender over 5 months of intervention

* Average per frequent non-attender per month and average cost per frequent non-attender per month and over 5 months of intervention

* Projected costs per frequent non-attender over 12 months post intervention

Further exploration of healthcare unit usage linked with costs followed a similar pattern as previously indicated for frequent non-attenders and when broken down to examine costs and effects pre-intervention and over the 5 months of the intervention there was little variance in cost. However, when monthly averages of healthcare unit usage and costs are examined per frequent non-attender there is a slight upward trend in cost average per month related to healthcare unit usage. Monthly estimates pre-intervention suggests an average cost of £47.35 per frequent non-attender in the previous 12 months and a monthly average cost per frequent non-attender of £53.44 over the 5 months of the intervention. Once costs are extrapolated and inferred for the next 12 months following the intervention there is an increase in costs from £568.24 per annum to £635.40 per frequent non-attender with a projected increase in costs of £67.16 per frequent non-attender per annum or £3,828 for all 57, frequent non-attender per

annum. These estimates are suggestive that the SPICE intervention is not as effective and efficient in reducing healthcare unit consumption with this subgroup and would indicate when costs are projected forward that this subgroup have the likelihood to increase healthcare unit usage and associated costs rather than have the effect of reducing usage and associated costs. However, caution should be taken with these estimates as they do not reflect the seasonal variation in healthcare usage that occurs on an annual basis or as a result of living with chronic or complex illnesses.

DISCUSSION AND RECOMMENDATIONS

The SPICE pilot Social Prescribing (SP) project was delivered over 5 months and had a total of 78 participants referred to the pilot intervention. In order to examine the effect of the intervention and estimate the impact of associated costs were calculated and based on healthcare unit usage (GP consultations and prescriptions dispensed) and analysis was conducted for the entire cohort of participants and then sub divided into two sub groups, frequent attenders and frequent non-attenders.

Estimation of effect of the intervention and resulting cost output for the entire cohort results indicate that there is direct cost saving of £6,113 or £78.37 per participant over the five months of the intervention. Grounded on unit of healthcare usage and projecting this variance and extrapolated over a 12-month period and all things been equal, the likelihood of a reduction in unit usage and therefore associated cost by £78.20 per participant per annum or a total of £6,099.60 when compared with healthcare unit usage in the preceding 12-month period and resulting effects of participating in the SPICE intervention. These estimates are suggestive that for the entire cohort of 78 participants there is a decrease usage of healthcare units and resulting costs and would therefore indicate that the SPICE intervention has a positive effect on healthcare unit usage and actual and inferred impact on associated healthcare costs as a result. Conversely, when the cohort were subdivided in to two distinct groups frequent non-attenders and frequent attender's findings indicate variances in these groups. Results of healthcare unit usage as well as associated costs suggest that participant in the SPICE intervention had little or no impact on healthcare unit usage and costs. When costs are projected forward based on monthly average costs for each participant in this subgroup while on the intervention and inferred for the following 12 months the estimates suggest there would be increase in costs from £568.24 per annum to £635.40 per frequent non-attender with a projected increase in costs of £67.16 per frequent non-attender per annum or £3,828 for all 57, frequent non-attender per annum. These estimates are suggestive that the SPICE intervention had no impact on this subgroup have the likelihood to increase healthcare unit usage and associated costs rather than have the effect of reducing usage and associated costs.

Nevertheless, among the frequent attenders (n=21) results suggest that the SPICE intervention considerable influence on this sub group of participants. Investigation of unit of healthcare usage and inferring this adjustment forward over a 12-month period and should all things remain equal results are suggestive of the probability of a reduction in unit usage and therefore a reduction in associated cost by £497 per FA per annum. This estimate was calculated when compared with costs per FA in the previous 12 months of £1,651 per annum per FA to £1,154 per FA per annum.

When average monthly unit healthcare usage and costs are projected forward for the next 12-month and compared with healthcare usage cost in the previous 12 months for all FA there is a reduction in healthcare unit usage with a resulting effect on costs.

Hence, should all things remain equal in the following 12 months post intervention there is contingent cost difference, which is the total cost for all FA over 12 months minus the anticipated healthcare usage cost in the next 12 months (£34,676 – £24,247 =£10,429). Even though the costs are reasoned to conclude future healthcare usage and costs and if healthcare usage differed in the future based on change of healthcare usage while participating in the SPICE intervention would be suggestive that the SPICE intervention had a substantial impact among frequent attenders reducing healthcare unit usage and associated costs. However, caution should be taken with these monetary estimates when projected forward for all subgroups as they do not reflect the seasonal variation in healthcare usage that occurs on an annual basis or as a result of living with chronic or complex illnesses.

It would be recommended for future evaluations of SP intervention projects that project evaluation and economic evaluation would be built into the project/research design at the development phase of the project to ensure that the appropriate and required data is collected over the duration of the project. This would ensure robust project and economic evaluation can be conducted and integrated in to all future SP intervention projects.

CONCLUSION

This evaluation of the SPICE pilot project produced estimates for the variance in healthcare usage for the monetary value of an SP intervention demonstrating cost saving as a benefit in usage of services by participants. Extrapolating estimates and projecting forward would indicate that the SPICE project could potentially yield greater cost savings and benefits if delivered over a longer period particularly when aimed at specific cohorts. This cost information may be of use to decision makers in determining the allocation of finite resources and the benefits of alternative non-clinical services that have health and wellbeing effects and positive impact on resource use.

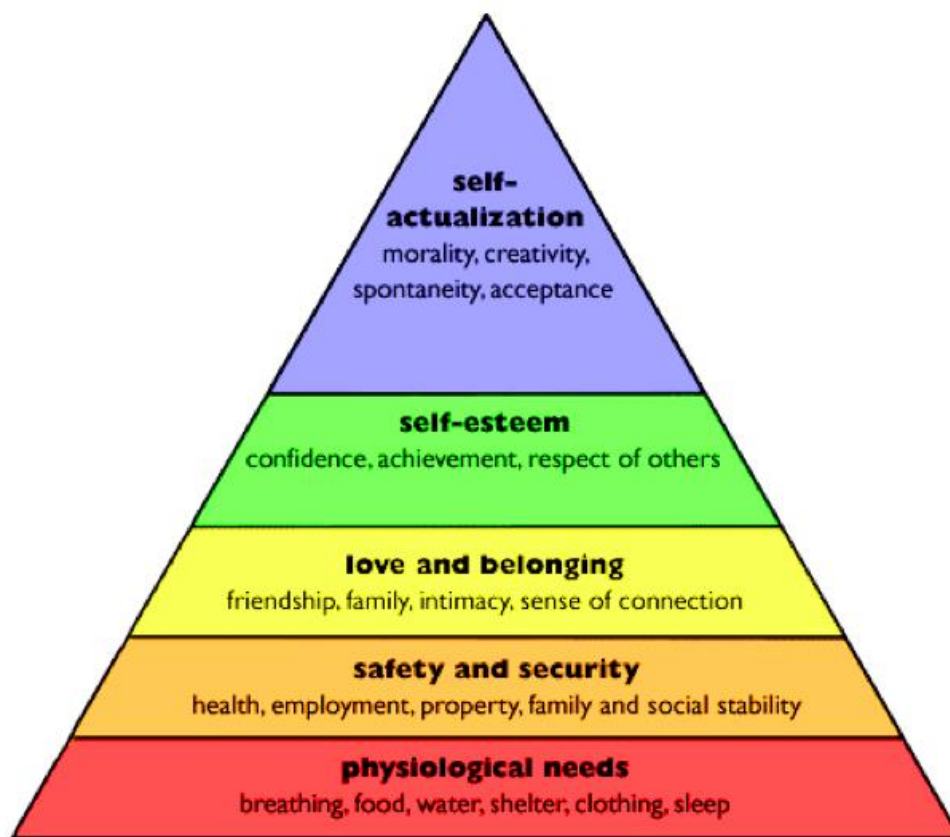
DISCUSSION AND RECOMMENDATIONS

Combining social prescribing and time credits is an innovative approach to social prescribing. This pilot has started to test the feasibility of this intervention for patients accessing GP practices. Initially it was proposed as an intervention for patients with low level anxiety and depression. The qualitative data shows that actually many of patients being referred through have much more complex needs, with deep rooted mental health issues, trauma, domestic and sexual abuse as well as social issues such as housing instability and debt problems.

These patients are often the frequent attenders. Whilst these patients may have the most need and represent the biggest burden on the GP practices, they conversely represent the biggest savings in terms of reduced GP appointments and demand on practice staff time when the social prescribing is effective. Their issues are more than just a 'quick fix' and these patients need a much more person-centred approach. This can be a huge challenge for social prescribers who may not be trained and have the competence to deal with such complex issues. What the qualitative data is telling us is that the addition of time credits to social prescribing is not suitable for these patients, they are resistant to engaging with time credits and there is a need to work with the social prescriber to address some of these complex issues first. It is not to say that time credits are not a useful intervention for some, particularly for those patients at the other end of the spectrum who are referred through with low level anxiety and loneliness and isolation.

It is recommended that future pilots integrate a system which triages appropriate patients to either the social prescribing (complex needs) or a social prescribing + time credit intervention (low to moderate needs). Maslow's Hierarchy of Needs (Fig 2) could provide a useful framework for this. Those patients who haven't satisfied the lowest levels of need 'physiological and safety and security' i.e. those with insecure housing, poverty and debt, abusive relationships - would be offer social prescribing but as they engage with the prescriber they are supported to move up hierarchy as these basic needs are met. Then time credits can be offered and used as a mechanism to support patients to meet the next level of need 'love and belonging and self-esteem' i.e. those with social anxiety, loneliness, social connectedness needs.

FIGURE 2: MASLOW'S HIERARCHY OF NEED



This was a 5-month pilot, which was limited by the I2S funding scheme rather than by clinical need of patients or informed to any of the available evidence of the most effective length of time to run a social prescribing intervention. Therefore, there was not enough time for the social prescribing intervention embed within all practices, leading to peaks and troughs in referrals as practices got more engaged. It is recommended that future pilots are extended to at least 12 months to allow the intervention to embed in GP practices and for those patients offered time credits to fulfil the whole 'time credit cycle'. The data does appear to demonstrate that there is an improvement in patient's wellbeing, that there is a perceived benefit to patients and staff and the evaluation provides insights to the problems and issues that patients are presenting with. However, without further data it is difficult to know whether the frequent attendance is temporary rather than persistent. A longer timeframe would allow more patients to be referred

to the intervention allowing more data to be collected and allow the testing of the assumption that it does indeed improve patient's outcomes and reduce the frequency of attendance.

The evaluation suggests that the approach employed by the two social prescribers was very different, this was partly informed by their existing skills, knowledge and competency. This brings into question the fidelity of the intervention. In addition, due to the complex nature of the patients referred it is important that the social prescribers have access to the appropriate clinical supervision. It is therefore recommended that the social prescriber is employed by the CVHB and trained with appropriate techniques to support these patients and motivate them to make a change, for example motivational interviewing techniques which have a strong evidence base for use in clinical practice with mental health patients and patients with complex needs.

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