



Royal College of
General Practitioners
Research & Surveillance Centre

Social prescribing observatory: A learning health system approach for using data to improve practice

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1. Summary

This report shares early learning from two independent workstreams from the Royal College of General Practitioners (RCGP) and the University of Oxford. The first looked at the use of non-medical interventions relevant to social prescribing from 2011-2019; and the second looked at social prescribing activity in 2020. We looked at the use of non-medical interventions related to social prescribing between 2011 and 2019. This largely predates the national expansion of social prescribing link workers in primary care and setting up of primary care networks. In this period:

- there were around 1.5 times as many referrals for women than men
- there were around 5 times as many referrals for people living in the least deprived neighbourhoods as in the most deprived
- the age group with the highest number of referrals was the 45-64 age group.

We also looked at what kinds of support and interventions relevant to social prescribing were recorded for the whole population, between 2011 and 2019:

- There were around 5 million interventions recorded in practices taking part; this was over 170 times the number of recorded referrals.
- The most commonly recorded category of interventions related to dietary advice, physical activity, and substance misuse.
- There was very little recording of support relating to mental health and wider social issues such as benefits, housing, finance and domestic violence.

We have also looked at referrals from January 2020 onwards to investigate what has happened during the COVID-19 pandemic.

Extrapolating this data to the whole of England, we estimate that between January and September 2020 there were around 250,000 social prescribing referrals recorded using the codes specified in guidance to primary care networks¹.

- Referrals went up steeply from the start of the lockdown in March 2020. There were also a high number of declined referrals in this same period.
- Referrals dropped after July, but remained at a higher level than before lockdown
- Referrals were highest for people over 65. We did not find statistically significant differences in rates of referral by gender, ethnicity and neighbourhood deprivation.

- Referrals were highest in London and lowest in the East of England. The East of England had the highest number of declined referrals. There were large variations in rates of referrals within regions.

It is important to take into account the context of the pandemic. Social prescribing link workers were asked to carry out wellbeing checks for people shielding. This could explain the demographics of people referred and the high level of declined referrals.

Care is needed in interpreting all of findings due to limitations in the quality of the data. Links to more detailed reports including statistical analysis are provided in the annex.

2. Background

It is well established that 80-90% of health outcomes are linked to [social determinants of health](#) including health-related behaviours, socioeconomic and environmental factors².

Social prescribing aims to address social determinants of health. According to NHS England [social prescribing](#) “enables all local agencies to refer people to a link worker. Link workers give people time and focus on what matters to the person as identified through shared decision making or personalised care and support planning. They connect people to community groups and agencies for practical and emotional support.”³

Social prescriptions include activities focused on health, education, skills development, sports, leisure and arts activities. According to the Kings Fund, there is a growing body of evidence that social prescribing can lead to a range of positive health and wellbeing outcomes, but further work is needed to strengthen the evidence base⁴.

The [NHS Long Term Plan](#) includes a commitment to make personalised care business as usual across the health and care system. In January 2019, NHS England announced a major expansion of social prescribing, as one of six components of the [comprehensive model of personalised care](#)⁵.

This report is aimed at primary care networks, the voluntary sector, link workers and others working on the implementation of social prescribing.

3. Why we need a social prescribing observatory

A major barrier to the generation of evidence is the lack of data on social prescribing activity and outcomes. This stems from the lack of standardisation of recording and the variable quality of recording by clinicians. To begin to address this, NHS England has developed [guidance](#) on using SNOMED codes for referrals, the Patient Activation Measure and the ONS Wellbeing Measure⁶.

Alongside this, the RCGP and the University of Oxford have developed a public [social prescribing observatory](#) along with a dashboard for individual GP practices. These resources use data from the RCGP Research & Surveillance Centre (RCGP RSC), which was established in 1967. It consists of a network of over 1,800 GP practices in England covering a population of around 8,000,000 people, who are broadly representative of the English population. The dataset consists of pseudonymised extracts of data from electronic health records^{7,8}. There are three ways to view the data:

- the observatory, which shows the data on a weekly basis
- heatmaps showing variation by ICS
- a local dashboard for use by GP practices taking part in the RCGP RSC.

The observatory and dashboard have two objectives:

- to understand the characteristics of people taking up social prescribing
- to highlight variation in social prescribing access across England.

The data is normalised to rates per 10,000 population and currently includes:

- referral to social prescribing service (SNOMED code 871731000000106)
- social prescribing declined (SNOMED code 871711000000103)
- total social prescribing activity (referrals and declines).

Two additional observatories and dashboards will be made available in early 2021 showing people's presenting needs, and the support interventions that they take up. The data can be disaggregated by:

- region and [Integrated Care System](#) (ICS)⁹
- index of multiple deprivation (IMD)
- demographic information (age, gender and ethnicity).

4. Using the observatory to improve practice

Practitioners (such as link workers, health coaches and GPs) and providers (including NHS and voluntary, community and social enterprise sector organisations) can use the observatory to see the impact of their initiatives on social prescribing activity through a learning health system approach. The data can also help to share learning with other areas, and address variation. For example, you can:

- compare your area to others across the country
- analyse the ratio of referrals to declined referrals
- investigate the link between social prescribing and health inequalities.

For GP practices taking part in the RCGP RSC network, the practice dashboard gives more detailed insight, and a way to see the impact of initiatives in real time.

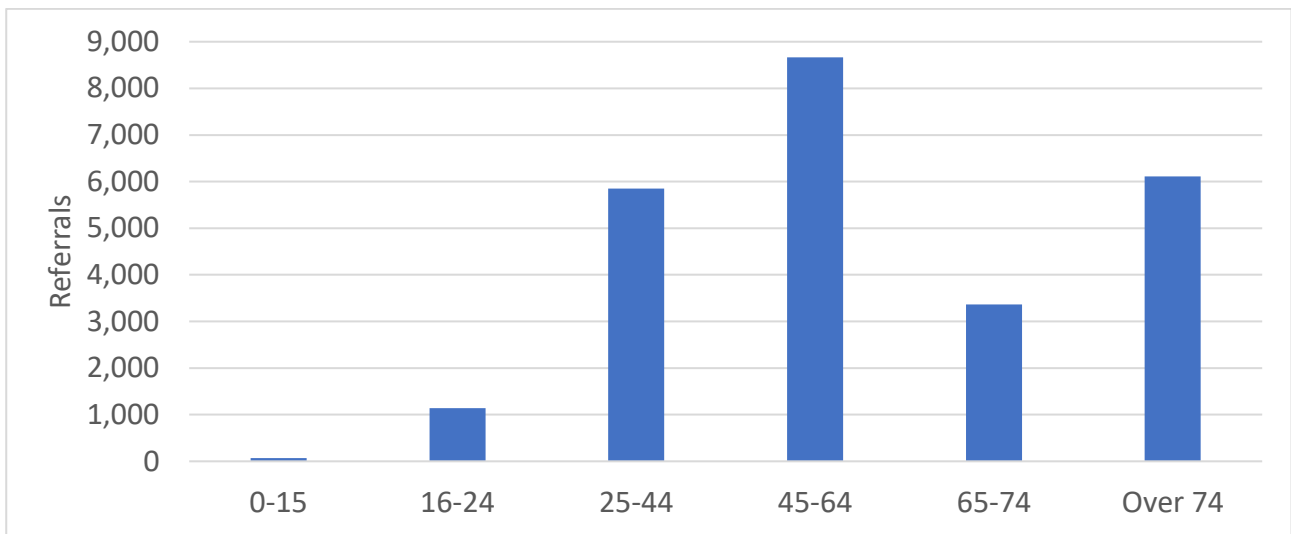
Local commissioners and national policy makers can use the data in similar ways, to help understand what is being delivered, which groups are accessing social prescribing and who may be missing out. This can inform policy development and commissioning plans.

5. Social prescribing activity from 2011 to 2019

We carried out a preliminary analysis for the use of non-medical interventions relevant to social prescribing between January 2011 and December 2019 to help us understand what kinds of data were being recorded and the types of intervention used before the more formal roll-out of NHS-England's Personalised Care initiative. We used this data to create a system of categories of interventions relevant for social prescribing, known as an ontology. This period largely predates the setting up of primary care networks, and the associated expansion of link workers from January 2019. There was no national guidance on recording until 2019. The data is likely to be inconsistently recorded and is not adjusted for population, so it is important to avoid formally linking findings from this work to NHS-England's Personalised Care initiative.

Our analysis found that there were around 29,000 referrals recorded in GP practices taking part in the RCGP RSC. This relatively low number is to be expected as there was no national guidance on how to record social prescribing until 2019¹. Figures 1-4 show a breakdown of these referrals by age, sex, ethnicity and neighbourhood deprivation.

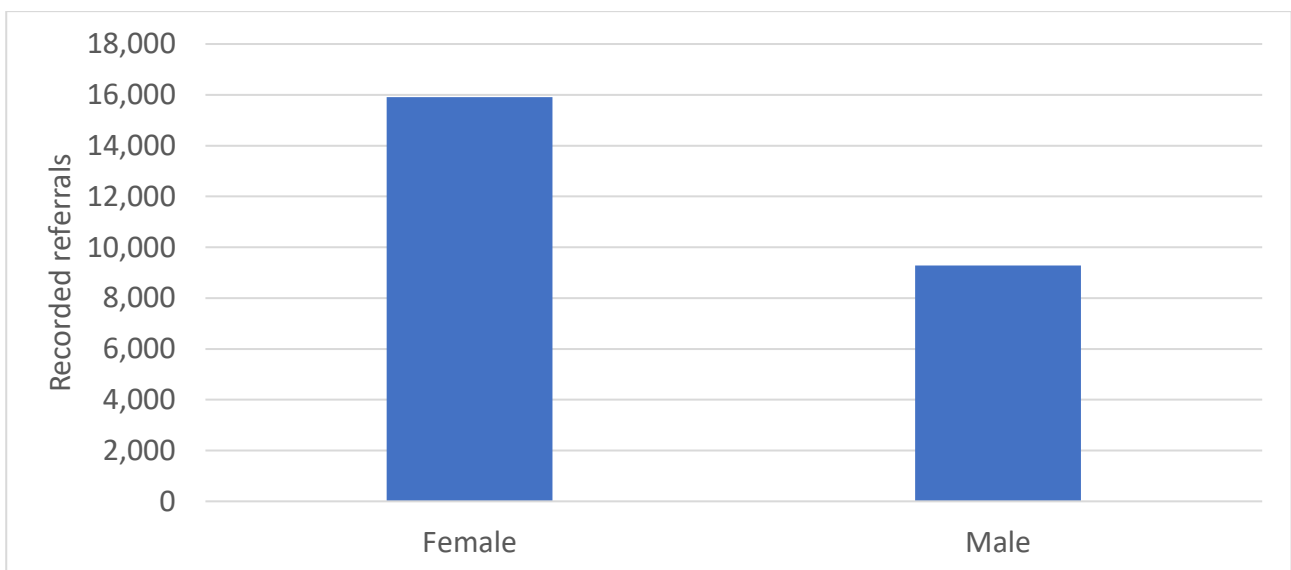
Figure 1: Social prescribing referrals recorded in the RCGP RSC by age group, 2011-2019



The age group with the highest number of referrals was 45-64.

This graph is not adjusted for population size, so does not enable us to compare the rate of referrals by age.

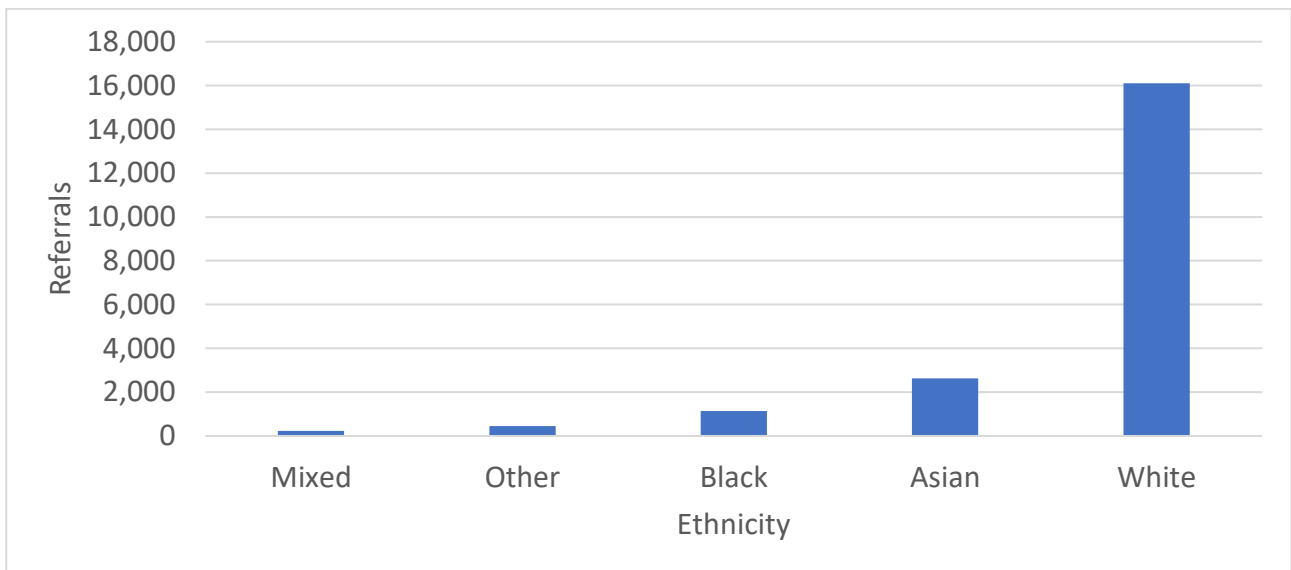
Figure 2: Social prescribing referrals recorded in the RCGP RSC by sex, 2011-2019



There were around 1.5 times as many referrals for women compared to men.

This graph is not adjusted for population size, so does not enable us to compare the rate of referrals by sex.

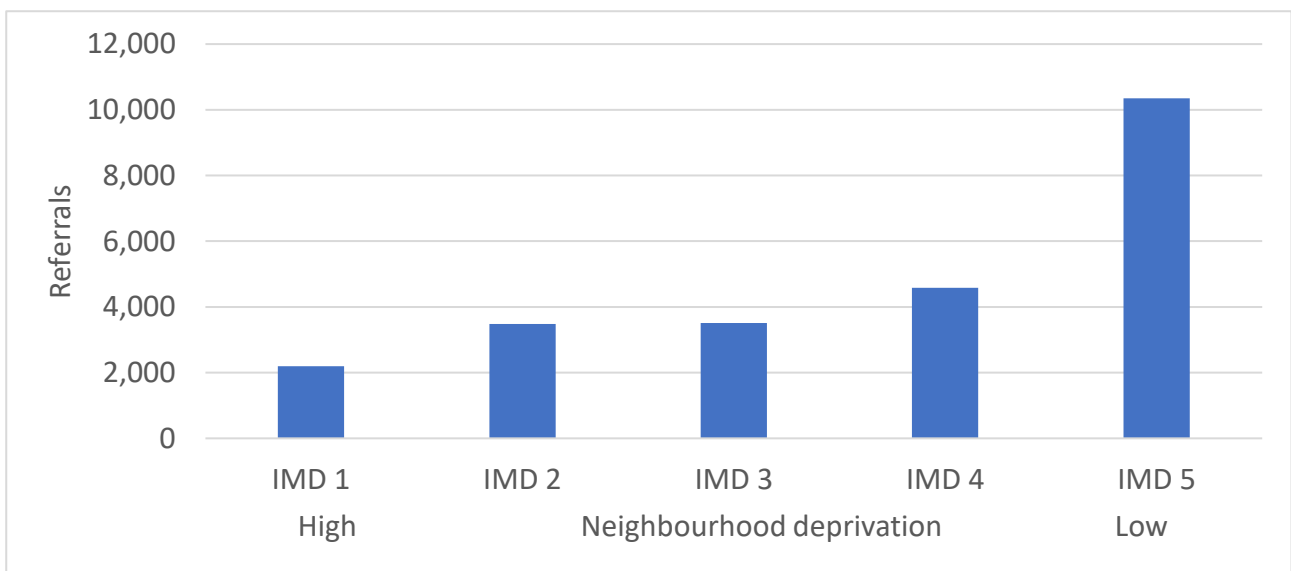
Figure 3: Social prescribing referrals recorded in the RCGP RSC by ethnicity, 2011-2019



The highest number of referrals was for people with a white ethnicity

This graph is not adjusted for population size, so does not enable us to compare the rate of referrals by ethnicity.

Figure 4: Social prescribing referrals recorded in the RCGP RSC by neighbourhood deprivation, 2011-2019

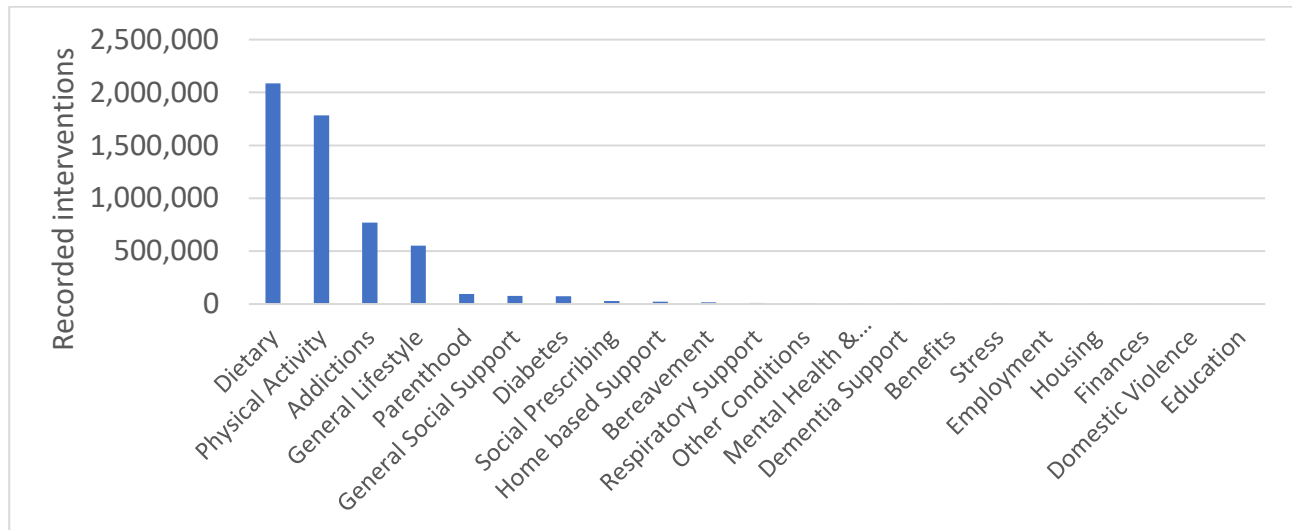


There were around 5 times as many referrals for people living in the least deprived neighbourhoods (IMD 5) compared with the most deprived neighbourhoods (IMD 1).

This graph is not adjusted for population size, so does not enable us to compare the rate of referrals by neighbourhood deprivation.

In contrast to the limited use of social prescribing referral codes, we found that there were over 5,000,000 non-medical interventions relevant to social prescribing recorded in GP practices taking part in the RCGP RSC (Figure 5) – over 170 times larger than the number of social prescribing referrals recorded. However, as Figure 5 shows, there are very low levels of activity recorded in some categories. This could reflect gaps in recording, in particular of support provided by the voluntary sector.

Figure 5: Interventions and support relevant to social prescribing referrals recorded in the RCGP RSC, 2011-2019



The most commonly recorded category of interventions related to dietary advice, physical activity, and substance misuse. There was very little recording of support relating to mental health and wider social issues such as benefits, housing, finance and domestic violence, despite relevant codes being available.

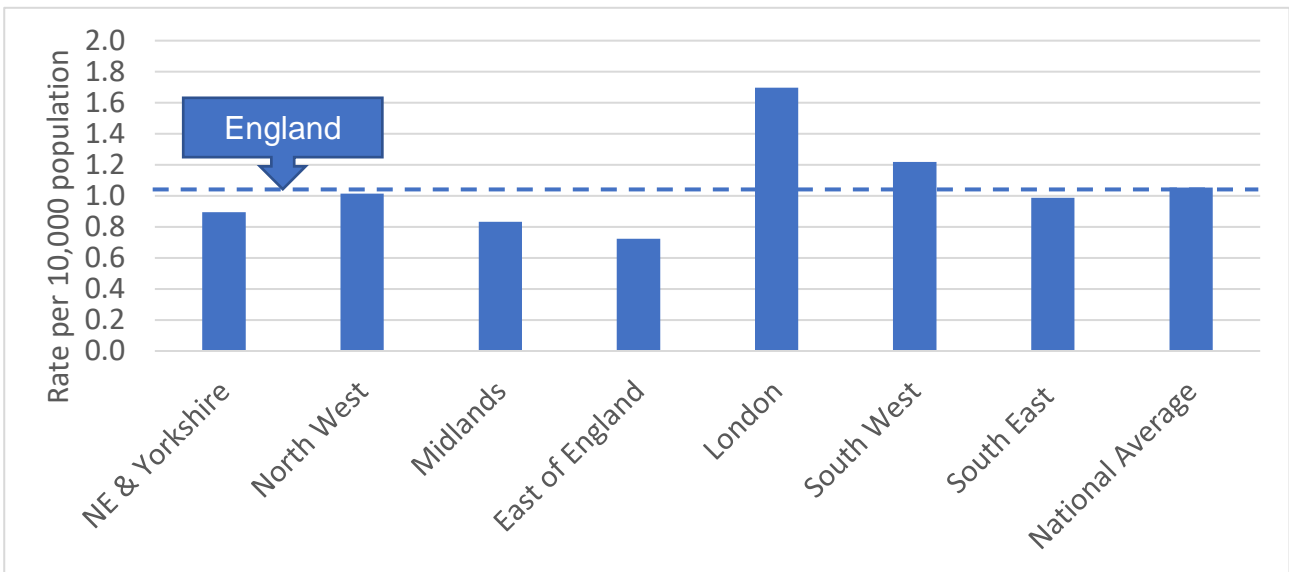
6. Social prescribing activity from January 2020

In the current phase of work, we have developed live data on social prescribing (based on codes specified in guidance¹) to provide insight at national, regional, ICS and GP practice level. The work was designed to help us understand how social prescribing practice was changing as a result of COVID-19. We carried out descriptive analysis for the period January to September 2020, giving a short baseline period before the start of the pandemic. The data is broken down by region, ICS, age sex, ethnicity and neighbourhood deprivation.

It is important to take into account the context of the pandemic and the rapid changes that resulted for social prescribing schemes:

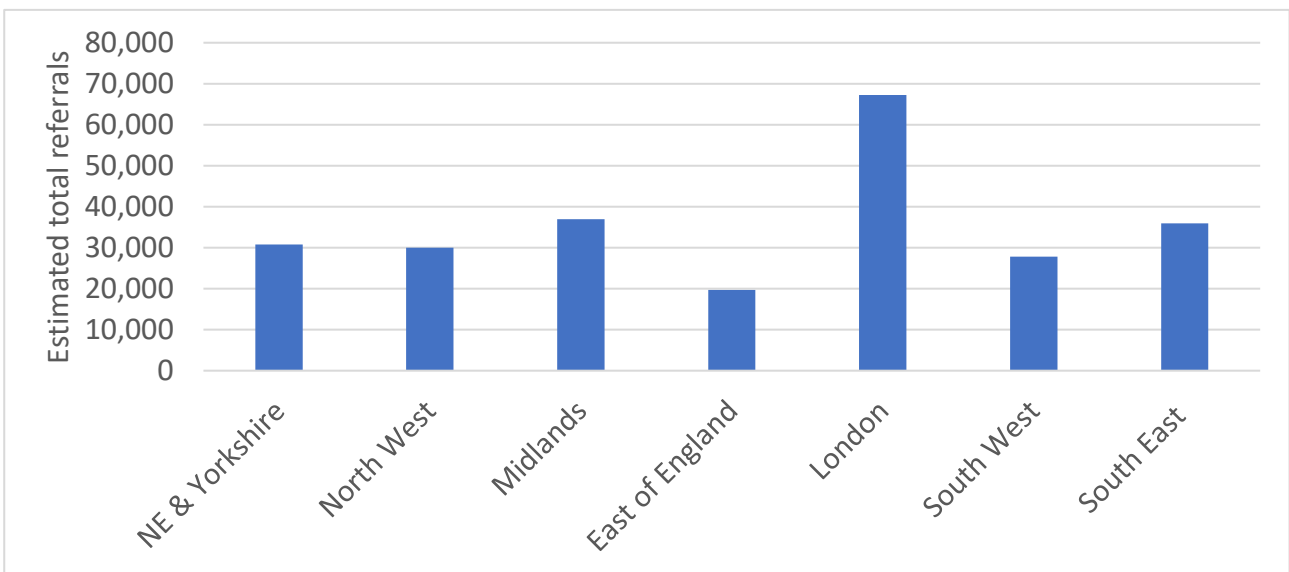
- Link workers were asked to carry out health and wellbeing checks for people shielding due to underlying health conditions. This support will have been very valuable for some people, but was not needed by many others, which may account for the high level of declined referrals we observe in some areas.
- Link workers were having to work remotely and in many cases with poor access to IT and information systems, making consistent recording difficult.

Figure 6: Rate of social prescribing referrals by region, January – September 2020



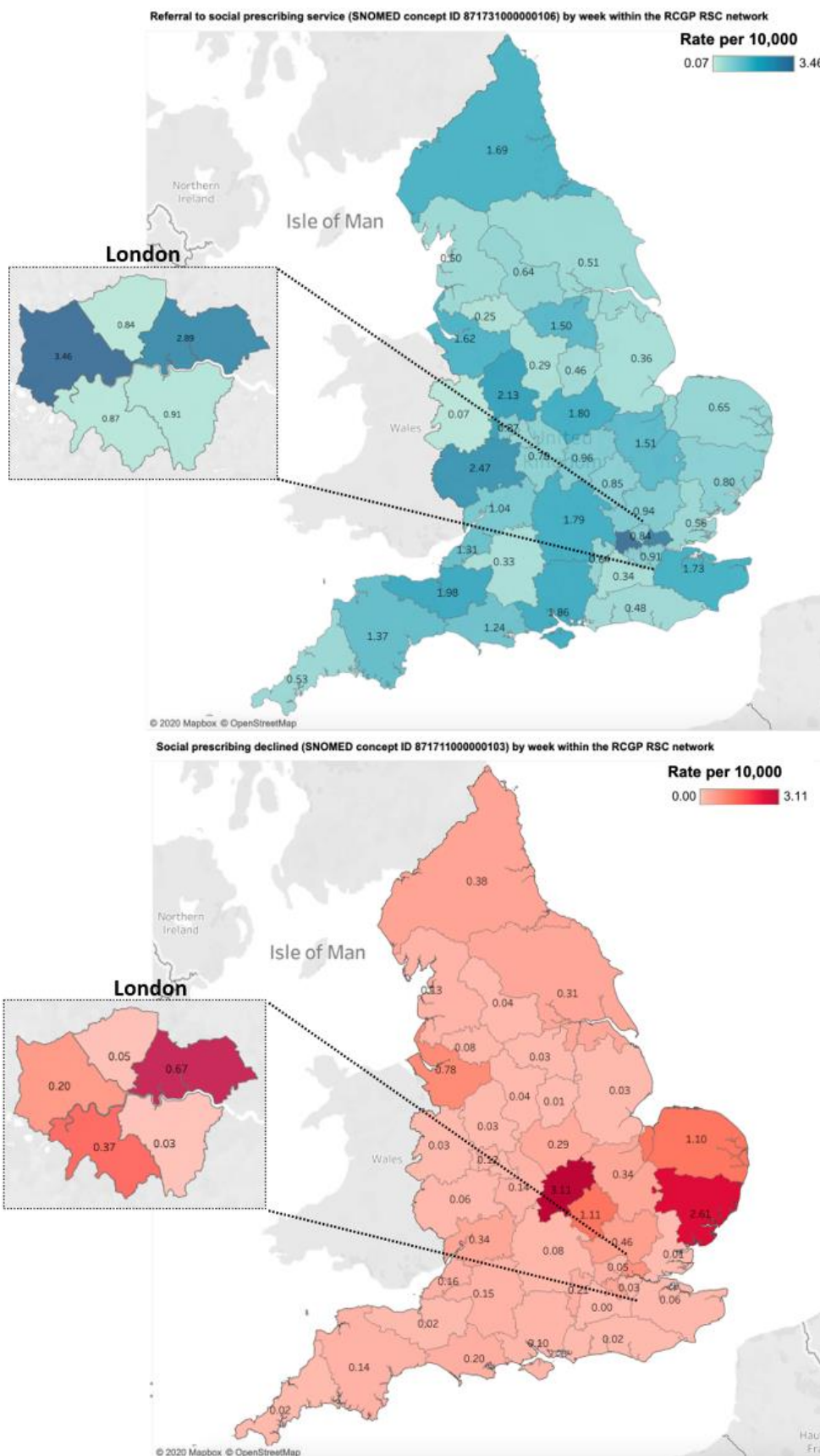
Referrals were highest in London and lowest in the East of England

Figure 7: Total social prescribing referrals by region, January – September 2020



Extrapolating data from the RCGP RSC to England, we estimate that between January and September 2020 there were around 250,000 social prescribing referrals

Figure 8: Rate of referrals and declined referrals by ICS, January – September 2020



There are large variations in rates of referrals and declined referrals within regions. The East of England had the highest rates of declined referrals

Figure 9: Cumulative referrals and declined referrals by week, January - November 2020

Social Prescribing Observatory v1.2d



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Please hover over the individual chart elements to view detail in the tool-tip.

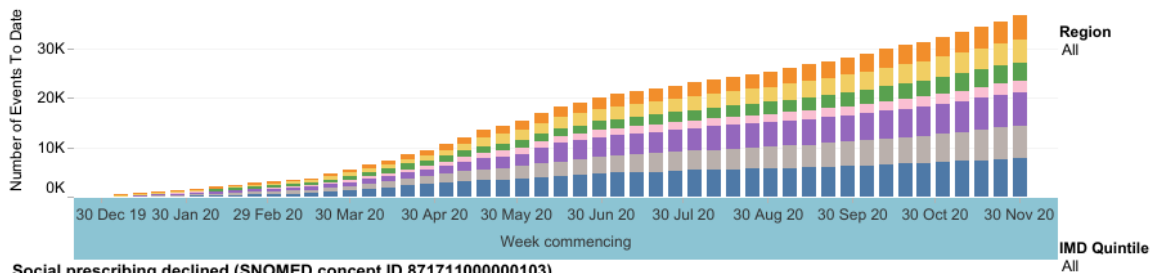
Region Age IMD Quintile Ethnicity Gender

North East and Yorkshire Midlands London South East
 North West East of England South West

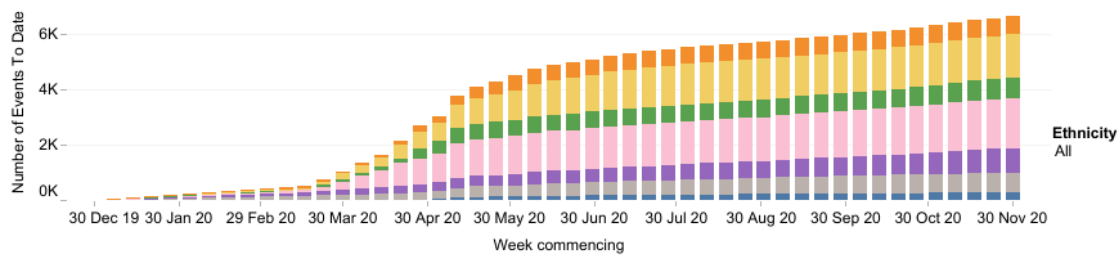
Summarise by Week To date
 Age All

Please select an STP
All

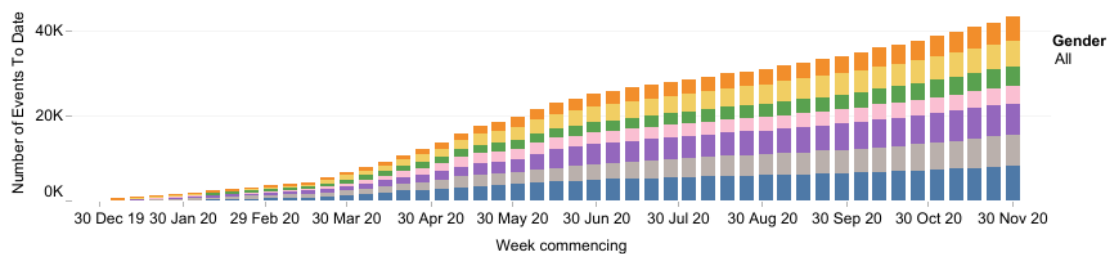
Referral to social prescribing service (SNOMED concept ID 87173100000106)



Social prescribing declined (SNOMED concept ID 87171100000103)



All social prescribing activity (referral and declined)



*Graphs include data from all practices in the RCGP RSC network to date.
**Any STP that is selected will appear within the stacked bars.

*Referrals in all regions went up steeply between March and June 2020.
There were also a high number of declined referrals in the same period, which may reflect a focus on people shielding.*

Figure 10: Rate of referrals and declined referrals by week and age group, January – November 2020

Social Prescribing Observatory v1.2d



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Please hover over the individual chart elements to view detail in the tool-tip.

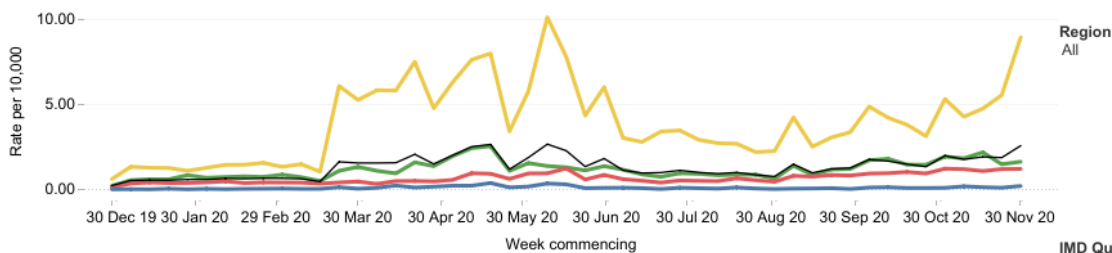
Region Age IMD Quintile Ethnicity Gender

All Ages 0-17yrs 18-39yrs 40-64yrs 65+yrs

Age
All

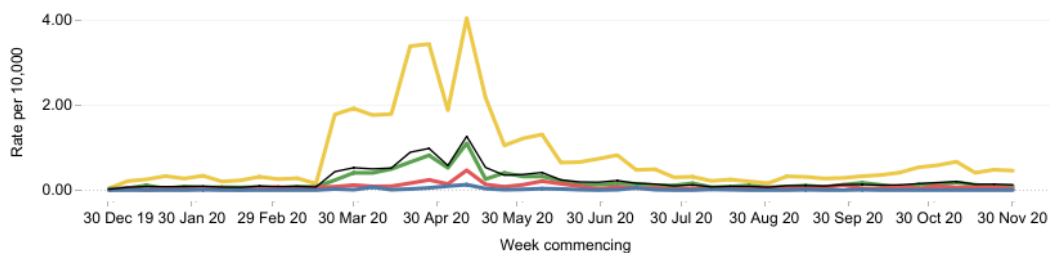
Please select an STP
All

Referral to social prescribing service (SNOMED concept ID 871731000000106)



Region
All

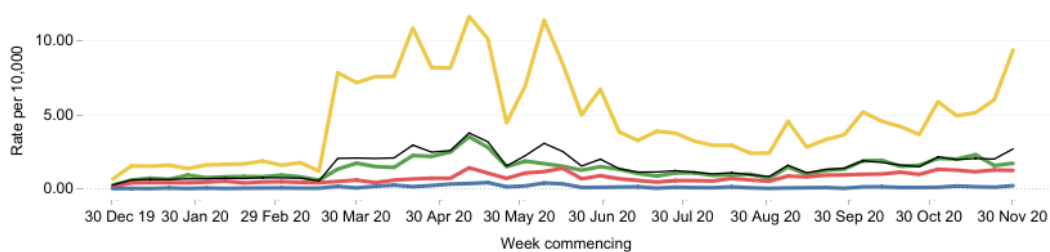
Social prescribing declined (SNOMED concept ID 871711000000103)



IMD Quintile
All

Ethnicity
All

All social prescribing activity (referral and declined)



Gender
All

*Graphs include data from all practices in the RCGP RSC network to date.
**The rate per 10,000 for your selection can be compared to the rate for all levels (black line).

Since June 2020 rates of referral have dropped but remain at a higher level than before lockdown.

The rate of referral for people over 65 is consistently higher than for other age groups

Figure 11: Rate of referrals and declined referrals by week and sex, January-November 2020

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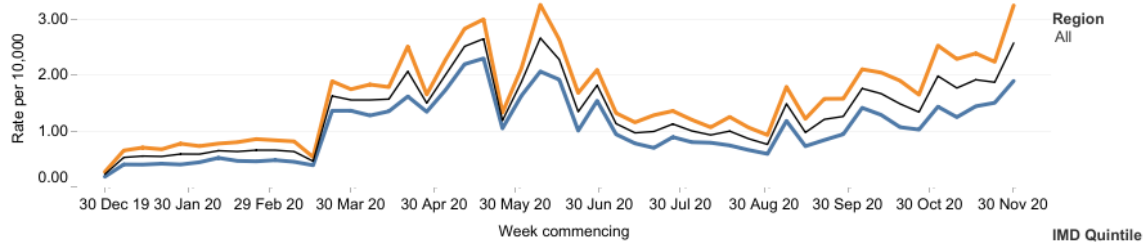
Please hover over the individual chart elements to view detail in the tool-tip.

Region Age IMD Quintile Ethnicity Gender

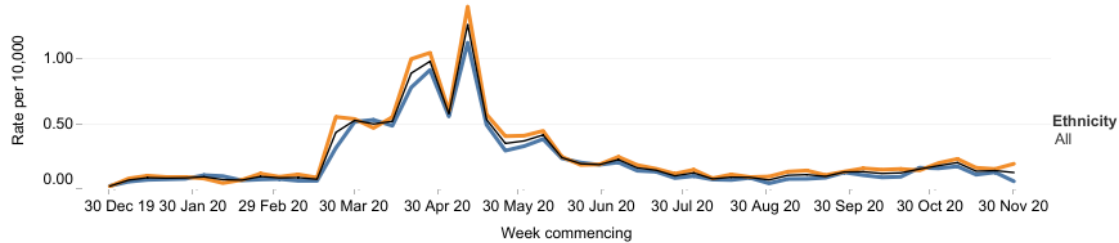
Male & Female Female Male

Please select an STP
All

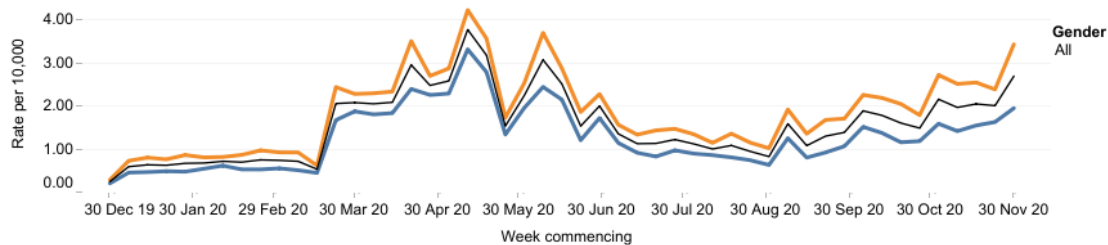
Referral to social prescribing service (SNOMED concept ID 87173100000106)



Social prescribing declined (SNOMED concept ID 87171100000103)



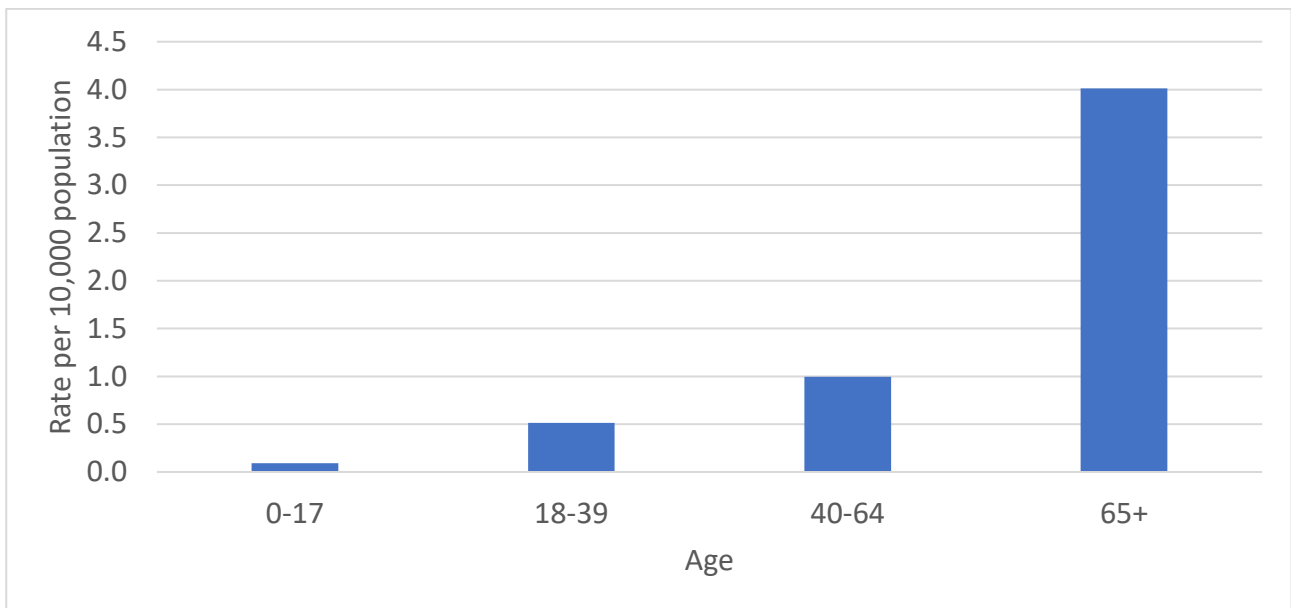
All social prescribing activity (referral and declined)



*Graphs include data from all practices in the RCGP RSC network to date.
**The rate per 10,000 for your selection can be compared to the rate for all levels (black line).

*Rates of referral are slightly higher for women as compared to men.
Rates of declined referrals are roughly equal.*

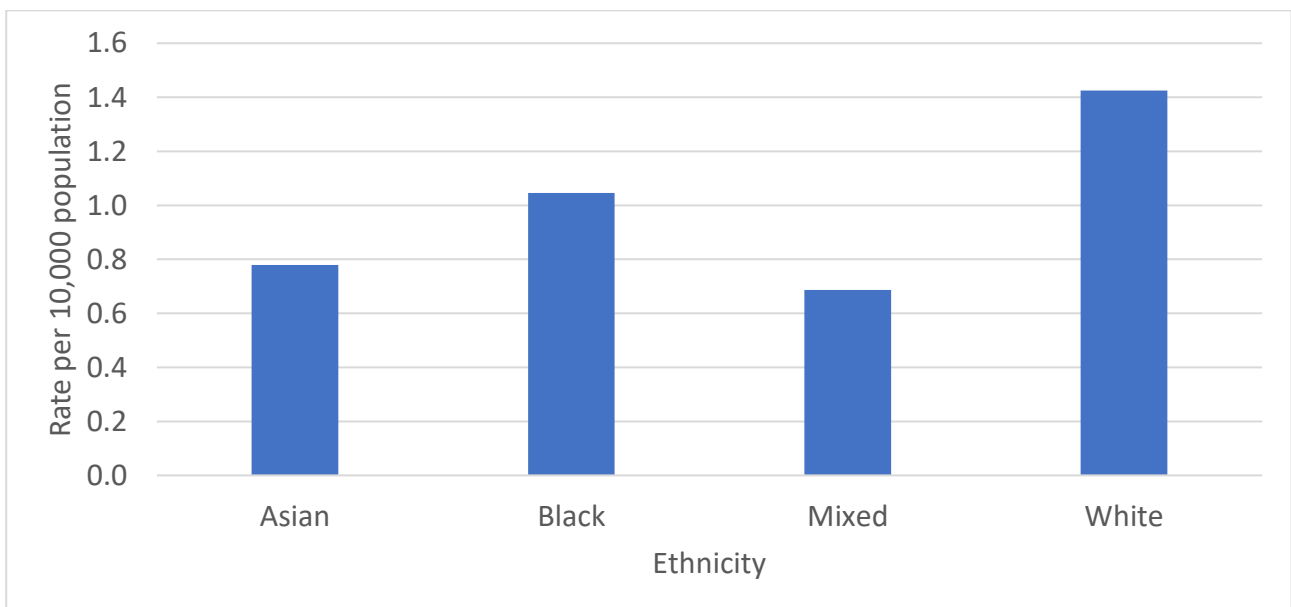
Figure 12: Rate of referrals by age group, January-September 2020



Rates of referrals are higher than average for people over 65, and lower than average for people aged under 40.

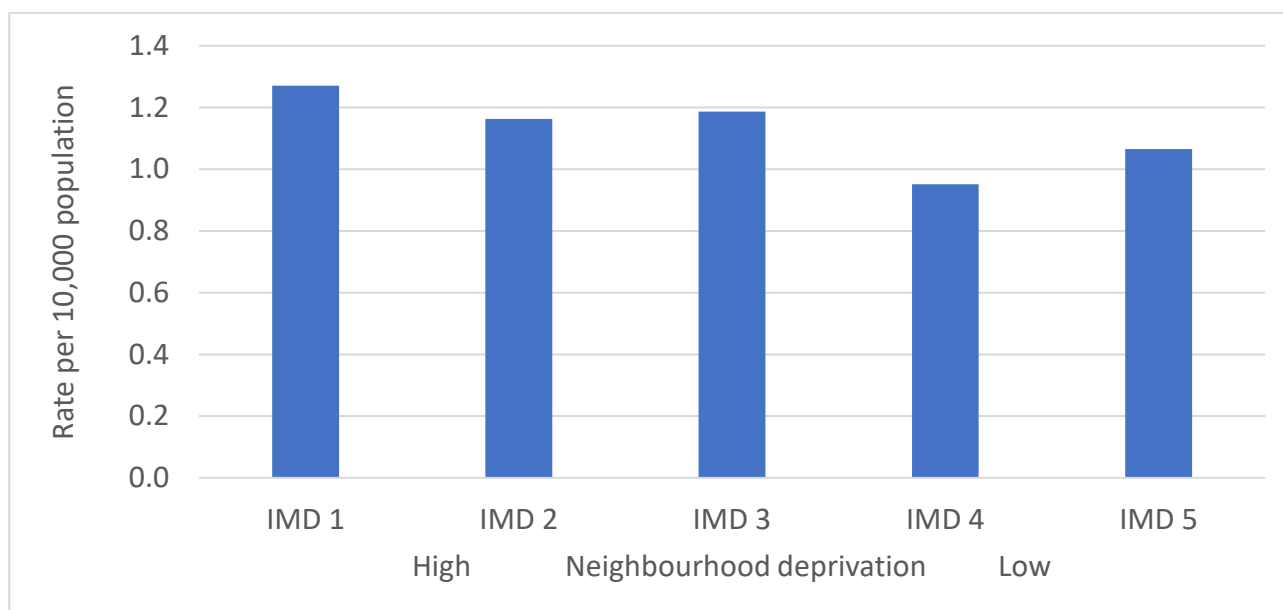
These differences were statistically significant (see annex for link to the analysis).

Figure 13: Rate of referrals by ethnicity, January-September 2020



The rate of referral was highest for people from a white background, and lowest for people from a mixed background. However, these differences were not statistically significant.

Figure 14: Rate of referrals by neighbourhood deprivation, January-September 2020



The rate of referral was slightly higher in the most deprived neighbourhoods (IMD 1), and lowest in the least deprived neighbourhoods (IMD 5).

However, these differences were not statistically significant.

7. Limitations

A key limitation of any resource based on electronic health records is that it will only be as good as the quality of coding used by practitioners who input the data. Despite these limitations, we feel that the RCGP RSC has enough GP practices and represents a large enough population that the data gives us a general indication of trends across England.

There are several reasons why caution is needed when attempting to interpret social prescribing activity (referrals and/or declines) from the observatory:

- It is likely that a lot of activity is missing in particular where social prescribing is carried out in voluntary, community and social enterprise sector organisations by people who do not have access to electronic health records
- The rates per 10,000 population need to be interpreted with caution because they may represent a very small number of events
- The coding of referrals gives no indication of what the presenting issue was or what, if any, activity was taken up.
- This gap in data means at this stage, it is not possible to understand any potential benefits and costs of social prescribing.

8. Conclusions and next steps

These findings are tentative, and they cover a period when health services were disrupted by the COVID-19 pandemic. They do raise some important issues:

- Social prescribing practice changed a great deal from the start of the pandemic, with much higher rates of referrals and also high rates of declined referrals. This is likely to reflect both increased need and a change of role for link workers, for example to provide wellbeing checks for people shielding. It is not clear how well this activity was linked to need, as there was also a high rate of declined referrals.
- Referrals were mainly for older people, so children and young people and younger adults in need may be being missed. The levels of referrals from people from minority ethnic backgrounds and people living in the most deprived neighbourhoods may not be in line with needs, given the evidence that the pandemic is having the worst impact for people who already experienced health inequalities.
- The focus of the NHS on targeting support at people who were shielding - mainly older people with pre-existing health conditions - could explain the patterns in the data.
- There is a lot of variation across England, suggesting a need to increase data quality and consistency, in line with the national guidance.

The priorities for the next stage of the work are:

- To add data on needs, health conditions and uptake of interventions, making links with national work on population health management and health inequalities.
- To develop a longer-term dashboard extrapolated to national level, which will include other elements of personalised care as well as social prescribing
- Support the development of a minimum dataset for social prescribing, and work with GP practices and link workers to improve data quality

9. Annex

More detailed analyses are available on the Research and Surveillance Centre website:

- [Analysis of historic data for the period 2011-2019](#)
- [Analysis of observatory data for the period Jan – Sep 2020](#)
- [Social prescribing ontology](#)

For contact details for the Research and Surveillance Centre see:

<https://orchid.phc.ox.ac.uk/index.php/contact-us/>

10. References

- ¹ Social prescribing link workers: Social prescribing link workers: Reference guide for primary care networks – Technical Annex. Annex I - Social prescribing referral systems. NHS England, January 2019 (updated June 2020)
<https://www.england.nhs.uk/publication/social-prescribing-link-workers/>
- ² Hood CM, Gennuso KP, Swain GR, Catlin BB. County Health Rankings: Relationships Between Determinant Factors and Health Outcomes. *American Journal of Preventive Medicine*; 2016 50(2): 129-135. <https://doi.org/10.1016/j.amepre.2015.08.024>
- ³ Social prescribing and community-based support: Summary guide [Internet]. NHS England. [cited 2020 August 17]. Available from: <https://www.england.nhs.uk/wp-content/uploads/2019/01/social-prescribing-community-based-support-summary-guide.pdf>.
- ⁵ Delivering universal personalised care [Internet]. NHS England [cited 2020 Jan 26]. Available from: <https://www.england.nhs.uk/personalisedcare/upc/>
- ⁶ Social prescribing and community-based support: Summary guide [Internet]. NHS England [cited 2020 Jan 26]. Available from: <https://www.england.nhs.uk/publication/social-prescribing-and-community-based-support-summary-guide/>
- ⁷ de Lusignan S, Correa A, Smith GE, Yonova I, Pebody R, Ferreira F, Elliot AJ, Fleming D. RCGP Research and Surveillance Centre: 50 years' surveillance of influenza, infections, and respiratory conditions. *Br J Gen Pract*. 2017 Oct;67(663):440-441. doi: 10.3399/bjgp17X692645.
- ⁸ Correa A, Hinton W, McGovern A, van Vlymen J, Yonova I, Jones S, de Lusignan S. Royal College of General Practitioners Research and Surveillance Centre (RCGP RSC) sentinel network: a cohort profile. *BMJ Open*. 2016 Apr 20;6(4):e011092. doi: 10.1136/bmjopen-2016-011092.
- ⁹ Integrated Care Systems [Internet]. NHS England [cited 2020 Dec 12]. Available from: <https://www.england.nhs.uk/integratedcare/integrated-care-systems/>