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Quantifying the Impact of Patient-Practice Relationship Quality on the Levels of the Average Annual Antidepressant Practice Prescribing Rate in Primary Care in England

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ABSTRACT

Objective: The National Health Service (NHS) in England makes data on demographics, prescribing, location, and specific conditions in general practice (GP) practices publicly available. The GP Patient Survey captures patients' views of their GP practice. The objective of this study was to determine how patient experience of a GP may relate to the volume of antidepressant prescribing at that practice.

Methods: We examined how antidepressant prescribing rates relate to specific NHS GP Patient Survey metrics. Postal questionnaires were sent out to 2.2 million adults registered with GP practices in England from January to March 2018. The national survey response rate was 34.1%.

Results: The average annual antidepressant practice prescribing rate (AAAPPR) was 0.11, with 90% of practices falling between 40% and 160% of this value. Practices with a higher overall experience rating prescribed more antidepressants. Practices more effective in empowering their patients, as assessed by "How confident are you that you can manage any issues arising from your condition (or conditions)," prescribed less antidepressants. The difference between the lowest and highest decile of prescribing for this response was over 10% and potentially modified by changing practice approach.

Conclusions: There are opportunities to optimize antidepressant prescribing in GP practices. Antidepressants are a key facet of depression treatment. Our findings show that patient empowerment is a key modulator of antidepressant prescribing.

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Antidepressant prescribing continues to increase worldwide, with 5%–16% of adults receiving antidepressants annually in the United Kingdom.¹ Over the last 50 years, the factors that have contributed to increased prescribing include the introduction of tricyclic antidepressants (TCAs) in the late 1960s,² the addition of selective serotonin reuptake inhibitors (SSRIs) in the 1980s,³ and increased long-term prescribing throughout the 1990s and 2000s.⁴

The NHS in England makes comprehensive data on prescribing rates and levels of various conditions and local services in primary care publicly available. In the 3 years from 2014–2015 to 2017–2018 in general practice (GP) practices in England, there was a 37% rise in the number of people recorded in the primary care depression register and a 22% rise in total doses of antidepressants prescribed.⁵ The total number of different unique antidepressants at different dose levels increased from 94 to 107. Data from NHS Digital have shown that 70.9 million prescriptions for antidepressants were given out in 2018 compared with 36 million in 2008.⁵ Over 900,000 people now access Improving Access to Psychological Therapies (IAPT) services.⁶

We previously applied multivariate regression analysis on publicly available NHS data at the GP practice level to identify how GP practice factors relate to outcome.⁷ This methodology was applied to analyze antidepressant prescribing rates in relation to results of the NHS GP Patient Survey of patients' experience of their GP practice and demographic factors and comorbidity profiles of the GP list. The objective was to see how patient experience of a GP practice may relate to the volume of antidepressant prescribing at that practice.

METHODS

We utilized national-level data resources for the analysis. The nationally published population demographic, practice parameter, and prescribing behavior data were collected for each GP practice and year. The defined daily dose (DDD) levels published by the Anatomical Therapeutic Chemical Classification System With DDD⁸ were applied to convert all prescribing into doses of antidepressant.

Separately, we also utilized the data from the NHS GP Patient Survey⁹ run by Ipsos MORI (United Kingdom) on behalf of NHS England. Published results show how people feel about their own local GP practice. Postal questionnaires were sent out to 2.2 million adults registered with GP practices in England from January to March 2018. Over 750,000 patients completed and returned a questionnaire, resulting in a national survey response

Clinical Points

- Practices with a higher overall patient experience rating appear to prescribe more antidepressants, and practices more effective in empowering their patients appear to prescribe less.
- Antidepressants are only a single facet of depression treatment, and patient empowerment may be a key intervention.

rate of 34.1%. Topics covered include overall experience of the GP practice, local GP services, making an appointment, patient health, and when the GP practice is closed.

As the analysis used GP practice-level data, there was no requirement to seek ethics permission. The questions were part of the survey sent to this national-level sample.

Statistics

Multivariate regression statistical models were used on 2017–2018 data to establish the link between selected independent factors and average annual antidepressant practice prescribing rate (AAAPPR) and the results for 3 different patient survey response levels (overall patient experience, patient support, and patient confidence in self-management). By applying the correlation coefficients to the difference in indicator between actual and median values, “adjusted practices” at median indicator levels were calculated. The practices were then allocated to deciles by each percentage-adjusted survey response value, and these deciles were plotted to examine the relationship between adjusted patient practice feedback and adjusted AAAPPR.

RESULTS

The AAAPPR was 0.11, with 90% of practices falling between 40% and 160% of this value. Therefore, on any day, on average, around 11% of adults in Britain take an antidepressant. This finding is based on the 6,194 practices for which data were available (we took those with more than 2,000 patients on the practice list in 2017–2018), with 2.1 billion doses of antidepressant being prescribed to a total population of 52 million people.

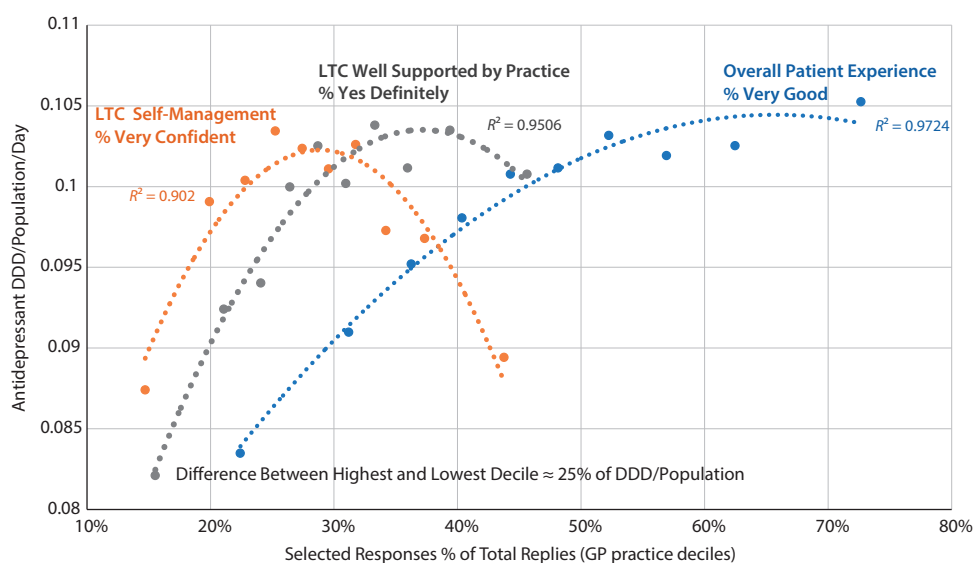
Figure 1 shows the results of the statistical model used to calibrate the selected responses. The model accounted for 35.9% of the variation in AAAPPR. Practices with a higher overall rating (“Overall, how would you describe your experience of your GP practice?”) by people with a long-term condition (not just depression) prescribed more antidepressants.

Practices more effective in empowering their patients with any long-term condition (assessed by “How confident are you that you can manage any issues arising from your condition [or conditions]?”) prescribed less antidepressants for both high and low responses. The difference between the lowest and highest decile of prescribing for this response is over 10% and is potentially modifiable by changing the GP practice approach. The relation between perceived support for a long-term condition and antidepressant prescribing was weak and did not highlight any trend.

DISCUSSION

Antidepressants are the most prescribed psychoactive agents. Psychiatrists have a critical role in guiding

Figure 1. Link Between Patient Experience and Antidepressant Prescribing Adjusted for Local Factors^a



^aEach dot represents 1 decile by GP response of 570 practices with a population of 500,000 people (univariate analysis).

The questions were asked to the same group of people (national level sample).

Abbreviations: DDD = defined daily dose, GP = general practice, LTC = long-term condition.

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prescribing of these agents. The analysis presented here highlights the opportunity to review prescribing practice for antidepressants in every GP (family doctor) practice, so as to reduce practice-to-practice variation, by optimizing antidepressant utilization. Specifically, linking different national data sets has provided meaningful results in relation to the implications of the findings.

A positive overall patient practice experience was linked to increased antidepressant prescribing. Greater confidence of patients in their long-term management was linked to reduced antidepressant prescribing. We found a nonlinear relation with lower antidepressant prescribing at both extremes. As we covered a wide range of factors, the confounders may have been captured indirectly.

It may be possible to decrease prescribing by as much as 10% by improving patient confidence in the management of their conditions. This finding has implications for local clinical behavior and medication management across a locality in the NHS in the United Kingdom and elsewhere. Prescription of antidepressants is not necessarily clinically driven but is linked to the GP-patient relationship in a more generic sense. Antidepressants are frequently used as a bridging factor on the way to IAPT treatment.

SSRIs account for a significant proportion of antidepressant prescriptions. In 1 study,¹⁰ higher than standard SSRI doses were associated with the specific practice that the patient attended, longer duration of use of SSRIs, and coprescribing of SSRIs with long-term benzodiazepines or hypnotics.

Our findings at the level of national data should be put in the context of the important qualitative study by Johnson et al,¹¹ which described a number of factors associated with GP prescribing patterns. These factors included patient expectation, patient comorbidity, level of GP experience, frequency of review, and shared trust.¹⁰

Strengths and Limitations

A major strength of our work is that we used nationally available data for GP practices in England and linked across a number of datasets including the primary care prescribing data. A weakness is that we were limited by the questions that were asked in the national GP patient survey, and the responses were provided by all people with a long-term condition, not just those with depression. Also, we were unable to differentiate between long-term and episodic prescribing of antidepressants.

There are opportunities to optimize antidepressant prescribing in GP practices. The analysis presented here may help to achieve that goal. GPs always strive to “do the right thing” to help people. Antidepressants are only a single facet of depression treatment. However, increased awareness of

modulation of patterns of prescribing at a GP practice level by external factors may enable appropriate calibration of antidepressant prescribing in a given practice population. Patient empowerment in the management of depression may act as a positive therapeutic factor.

CONCLUSION

We described variations in the prescribing of antidepressants across GP practices in England in relation to the way patients actually experience those practices as reported in the NHS GP patient survey. Antidepressants are a key facet of depression treatment. Our findings show that patient empowerment is a key modulator of antidepressant prescribing. It may be possible to decrease prescribing by as much as 10% by improving patients' confidence in the management of their condition.

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