Antidepressant Use and Suicide Rate in England: The Geographic Divide

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Objective

• The aim of this research was to analyse the use of antidepressants in England and identify any trends, particularly with regard to usage over time, usage across geographic region, and correlation with national and European suicide rates.

Background

• Mental illness is widespread, with 1 in 3 people worldwide reporting symptoms indicative of a psychiatric disorder at some point in their lives.

• Depression is one of the largest single causes of disability worldwide and accounts for 4.3% of the global burden of disease.

• The use of antidepressants has risen globally since 1980 and within Europe has been reported to be correlated with a reduced suicide rate.1,2

Methods

• The number of antidepressant items prescribed, and the costs incurred by National Health Service (NHS) England were obtained for all years available (2003–2012) from the Health & Social Care Information Centre (HSCIC).3

• In addition to national data, antidepressant prescribing data from the HSCIC, including prescription numbers and costs, were also obtained for all years available at the level of individual Primary Care Trusts (PCTs) (2010/11–2012/13) and Clinical Commissioning Groups (CCGs) (2018/19).

• From this, prescribing data were collated for the four NHS regional area teams (North, Midlands & East, South, and London).4

• Antidepressant prescribing data were analysed against the most recently available population size estimates (2013) and national suicide rates (2012) for England, obtained from the Office for National Statistics.5

Results

Overall Antidepressant Use and Cost

• Antidepressant use across the four NHS England regional areas combined has increased dramatically in recent years and coincides with a year-on-year drop in ingredient costs.

• There were 27.7 million prescriptions in 2003, with a net ingredient cost of £395.2 million, compared to 55.2 million prescriptions in 2012, with a net ingredient cost of £211.1 million (Figure 1).

• From 2010 to 2014, almost £1 billion has been spent on antidepressants by NHS England, of which almost a third is accounted for by the North region and only 10% by London (Figure 2).

Regional Disparity

• From 2010 to 2014, the average number of prescriptions of antidepressants per 1,000 population was 1136, 914, 878 and 523 in the North, Midlands & East, South, and London, respectively (Figure 3).

• The regional disparity is further illustrated at the sub-regional level in Figure 4, the North East region clearly indicated as having the highest number of prescriptions per 1,000 population, averaging at 1136 compared to the London region with an average of 523 prescriptions per 1,000 population annually, between 2010 and 2014.

• Three of the four highest prescribing regions are in the North.

Suicide Rate

• The age-standardised suicide rate was 10.4 in England in 2012, and suicide was the leading cause of death for persons aged 20–34 years.6

• Average antidepressant use and suicide rate in the four explored regions are seen to be correlated. The highest and lowest age-standardised suicide rates were observed for the North (12.0 per 100,000 people) and London (8.7 per 100,000 people), respectively, reflecting the pattern of average antidepressant use by region from 2010 to 2014 (Figure 3, Figure 4).

Discussion

• The overall rise in antidepressant prescription in England is concerning. However, it is unclear whether this is due to an increase in people requiring treatment for mental health issues, or if antidepressants are being prescribed more freely, for milder forms of depression and other disorders.

• Conversely to the rise in antidepressant use, net ingredient costs have reduced rapidly year-on-year. This could be due to the expanding pharmaceutical market for antidepressants and the steady increase in generic formulations following patent expiries.

• The evidence suggests clear regional inequality in England with regard to antidepressant use. A North v South divide is apparent and may be explained in part by national well-being figures published by the Organisation for Economic Co-operation and Development,7 which show that southern regions have higher incomes, greater employment rates and better health on average, compared with northern regions.

• In Europe, reduced use of antidepressants has been correlated with a rise in suicide rates.8,9 It is notable that this correlation is reversed when studied in England. There may be a number of reasons for this, such as differences in culture, healthcare provision and societal view on mental health problems, though the relationship in England presented here is not necessarily causal and hence it is difficult to draw any firm conclusions.

Conclusion

• There is a clear divide within regions of England regarding antidepressant use and suicide rate, and the correlation between these two measures was found to be opposite to that reported for Europe generally. These findings highlight the importance of understanding mental illness and the underlying reasons for the wide disparity in England.

References

8. PMH63
9. PMH63

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