What was known before your paper was published?

Patients with dementia are sometimes prescribed antipsychotic drugs to help with the behavioural and psychological symptoms of dementia. However, according to NICE guidance, this should only be considered for severe symptoms and after other approaches have failed because of the increased risk of several health problems, particularly stroke. Before these health risks emerged, in the late 1990s and early 2000s, prescribing antipsychotic drugs to patients with dementia was quite common. Since then, several drug safety warnings and guidelines were published about these risks, between 2004 and 2012.

What did you do?

We wanted to see if the drug safety warnings and guidance had worked. To achieve this we examined if the prescribing of antipsychotic drugs to patients with dementia had reduced after warnings and guidance were released, by analysing the anonymised primary care records of over 111,000 older patients with dementia.

What did you find?

Antipsychotic drugs fall into 2 different groups, and the results varied across groups. For group 1 (older, first-generation antipsychotic drugs), there was a large reduction in prescribing from 8.9% in 2001 to 1.4% in 2014 but for group 2 (newer, second-generation antipsychotic drugs) there was hardly any difference between 2001 and 2014. However, even though there was little change for the group 2 antipsychotic drugs over the longer time period from 2001 to 2014, there were short term changes in prescribing in line with the drug safety warnings.
The publication of guidelines by the National Institute for Health and Care Excellence (NICE) had no immediate impact on prescribing but approximately 1 to 2 years later a longer term reduction commenced. Between 2012 and 2015, the reducing trend for prescribing of group 2 antipsychotic drugs ended. The likelihood that a patient with dementia would be prescribed an antipsychotic drug varied widely between different general practices.

**What insights/knowledge did you add?**

A further, carefully worded, warning may be needed to reduce the longer-term prescribing of some types of antipsychotic drugs that does not result in an increase in the prescribing of other types of drugs, which may also be regarded as inappropriate. Given the high variation in the likelihood between practices of a patient being prescribed an antipsychotic drug, perhaps the numerous computer systems in UK primary care could be used to alert the GP when this is happening. Another option might be medication reviews by clinical pharmacists working in general practices.

In general the impact of drug safety warnings and guidelines depends on multiple factors that are rarely investigated. Increased surveillance of the effectiveness of drug safety warnings and guidance is needed to improve the impact of future warnings and guidelines.