

Widely used physical health drugs may help treat serious mental illness

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Medications commonly used to combat physical health diseases, such as high blood pressure, could bring significant benefits to people with serious mental illnesses (SMI) such as schizophrenia, bipolar disorder or non-affective psychoses, according to a large cohort study led by UCL.

The study published in *JAMA Psychiatry* assessed the health data records of 142,691 patients with SMI in Sweden. It focused on those patients who had either been prescribed Hydroxymethyl glutaryl coenzyme A reductase inhibitors (HMG-CoA RIs), more commonly known as statins—which are used to reduce cholesterol/heart disease, L-type calcium channel antagonists (LTCC), used to reduce [high blood pressure](#), or biguanides (such as metformin), used to treat diabetes.

In this research, conducted with the Karolinska Institute, Sweden, and the University of Hong Kong, researchers analysed patients' health records relating to [self-harm](#) and psychiatric hospitalisation, and assessed whether these episodes occurred during a period when patients were taking the prescribed medication or in periods when they were not.

The study found that exposure to any of the study drugs was associated with reduced rates of psychiatric hospitalisation compared with unexposed periods. Self-harm was reduced in patients with [bipolar disorder](#) and schizophrenia during exposure to all study drugs and in patients with non-affective psychosis taking L-type calcium channel antagonists.

Lead author, Dr. Joseph Hayes (UCL Psychiatry), said: "Serious mental illnesses, including bipolar disorder, are associated with high levels of morbidity and are challenging to treat.

"Many widely used drugs, such as statins, have long been identified as having the potential for repurposing to benefit these disorders.

"This study is the first to use large population data sets to compare patient's exposure to these commonly used drugs and the potential effects on people with serious mental illnesses.

"Our research provides additional evidence that exposure to HMG-CoA

RIs, LTCC antagonists, and biguanides might lead to improved outcomes for individuals with SMI.

"Given these drugs are commonly used and well-known to doctors they should be further investigated as repurposed agents for psychiatric symptoms."

All the studied drugs are known to have an effect on the central nervous system; however, the mechanism of action is not well understood and researchers believe a clearer understanding of this may lead to new drug development to benefit those with SMI.

Dr. Hayes added: "All three studied drugs are globally licensed, commonly used, cheap, and relatively safe medications. They are therefore ideal candidates for repurposing.

"If substantiated, this study has considerable implications for clinical practice and [drug](#) development."

The studied drugs effects on patients were independent of whether [patients](#) were on or off drugs aimed at treating their SMI (such as antipsychotic medication or mood stabilisers).

More information: Association of Hydroxymethyl Glutaryl Coenzyme A Reductase Inhibitors, L-Type Calcium Channel Antagonists, and Biguanides With Rates of Psychiatric Hospitalization and Self-Harm in Individuals With Serious Mental Illness, *JAMA Psychiatry* (2019). [DOI: 10.1001/jamapsychiatry.2018.3907](https://doi.org/10.1001/jamapsychiatry.2018.3907)

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