Impact of Narcotics Information Management System on Inappropriate Benzodiazepine Receptor Agonist Prescriptions: A Quasi-Experimental Analysis in South Korea

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Abstract

Background: The South Korean government implemented the Narcotics Information Management System (NIMS) on 18 May 2018 to manage benzodiazepine receptor agonists (BzRAs) and narcotics effectively and establish a reporting mechanism for these drugs. This study assessed the effects of NIMS on inappropriate use of BzRAs. Methods: Using National Patient Sample data from 2016 to 2020, we analysed adult outpatients who were prescribed oral BzRAs. We conducted a time series and segmented regression analysis using selected indicators to analyse the monthly variations related to the inappropriate use of these medications. Results: The study revealed no significant changes in the indicators of inappropriate BzRA use following the NIMS implementation. Contrary to expectations, there was a significant increase in the proportion of patients exceeding Defined Daily Dose (DDD) and in those receiving concurrent prescriptions of multiple BzRAs, following the implementation of NIMS. The immediate impact of the COVID-19 pandemic was an increase in DDD exceedance; however, overall, this did not significantly affect BzRA use. Conclusion: The introduction of NIMS did not significantly enhance the management of BzRA misuse. Additional measures, including continuous monitoring, system improvements, and comprehensive education for prescribers and patients, are recommended to ensure the appropriate use of psychotropic medications.

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