

# Prescribing Patterns of SGLT2 inhibitors and GLP-1 receptor agonists in Patients with T2DM and ASCVD in South Korea

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## Abstract

**Background:** Despite cardiovascular benefits of sodium-glucose cotransporter 2 inhibitors (SGLT2i) and glucagon-like peptide-1 receptor agonists (GLP1RA) in patients with type 2 diabetes mellitus (T2DM) and atherosclerotic cardiovascular disease (ASCVD), their utilization remains low globally. This study aimed to evaluate the utilization of SGLT2i and GLP1RA in patients with T2DM and ASCVD, as well as the factors associated with medications in South Korea. **Methods:** This retrospective study was conducted from 2015 to 2020, using National Patient Sample claims data. The study population included adult patients with confirmed T2DM and ASCVD diagnosed between March 1 and October 31 each year. Demographic and clinical characteristics, and influencing factors were investigated. **Results:** Among 57,576 study participants, SGLT2i use increased from 1.2 % to 10.51 % during the study period, whereas GLP1RA use increased slightly from 0 % to 1.17 %. Older age, comorbid chronic kidney disease, concurrent use of dipeptidyl peptidase 4 inhibitors (DPP4i), and prescriptions from specific physician specialties negatively influenced SGLT2i use. Conversely, comorbid dyslipidemia, heart failure, concurrent use of sulfonylurea (SU), and prescriptions from cardiologists positively influenced SGLT2i use. For GLP1RA, older age, concurrent DPP4i use, and specific physician specialty were negative factors, whereas female sex, dyslipidemia, insulin, and SU use were positive factors. **Conclusions:** Despite increasing utilization, 88.35 % of eligible patients remained untreated with SGLT2i and GLP1RA as of 2020. This study highlights the disparities in utilization based on patient characteristics and physician specialties, emphasizing the need to remove barriers and enhance clinical benefits for high-risk patients.

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