ABSTRACT

OBJECTIVE: Drug overdoses continue to be the leading cause of accidental death in the United States resulting in a nationwide crisis. Opioids, many of them prescription, are now the primary cause of drug overdose related deaths. Gabapentinoids are being promoted by the Centers for Disease Control and Prevention as a safer alternative to opioids and have steadily been rising in prescribing rates. However, growing concern is mounting on the potential for gabapentinoid misuse. The goal of this dissertation was to deepen the knowledge and understanding of how gabapentinoids are currently being prescribed, with an emphasis on their co-prescribing with an opioid drug and potential negative outcomes.

METHODS: This study identified trends in the prescribing of gabapentinoids, specifically gabapentin and pregabalin, through a cross-sectional retrospective cohort analysis using South Carolina Medicaid data from 2009-2016. The analysis investigated demographic variances, prescribing rates, and prescription characteristics. Bivariate and multivariate logistic linear regression was utilized to identify potential predictors of the concomitant prescribing of a gabapentinoid and an opioid and subsequent overdose events.

RESULTS: Total gabapentinoids dispensed to South Carolina Medicaid beneficiaries increased from 23,204 in 2009 to 86,649 in 2016. Nearly 70% of patients were also administered an opioid concomitantly. Patients prescribed pregabalin (OR=1.367; CI:1.175–1.592), high gabapentinoid dosages (OR=3.088; CI:2.398–3.975), and long term gabapentin (OR=3.336; CI:2.949-3.774) or pregabalin therapy (OR=6.555; CI:
3.962-10.875) increased likelihood of opioid coprescribing. Concomitant prescribing was associated with an increased likelihood of opioid overdose (OR=1.223 CI: 1.014-1.476).

CONCLUSIONS: Gabapentinoid prescribing in South Carolina’s Medicaid has significantly increased in recent years. Concomitant prescribing of an opioid and a gabapentinoid is extremely common and more likely when prescribed at higher dosages and for extended periods of time. Patients coprescribed an opioid and gabapentinoid appear to be at a higher risk of opioid overdose. Increasing physician awareness regarding the potential adverse effects of opioid and gabapentinoid concomitant administration, coupled with additional monitoring of gabapentinoids, is recommended to ensure safe prescribing of these medications.