Impact of Prospective, System-Wide Intervention to Influence Opioid Prescribing Practices Among Patients with Back Pain

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INTRODUCTION: In response to the opioid epidemic, a multidisciplinary team at our healthcare system designed and integrated the alert-based, clinical-decision support intervention, “Prescription Reporting and Immediate Medication Utilization Mapping” (PRIMUM). PRIMUM identifies patients at risk of opioid misuse based on five evidence-based risk factors integrated as triggers prompting alerts: early refill; 2+ ED/Urgent Care visits with onsite opioids; 3+ prescriptions of opioids/benzodiazepines; prior overdose; and positive toxicology screen. At the point of care, clinicians prescribing an opioid and/or benzodiazepine for patients with at least one trigger are alerted. Prescribers are required to either override alert to continue or cancel the prescription.

METHODS: The PRIMUM data and demographic data for patients with back pain related ICD10 codes were queried. We calculated rates of “decision influenced” (modifying or canceling prescriptions) in response to the PRIMUM intervention.

RESULTS: Seven percent (6,875/97,699) of back patients with 8,337 encounters received an opioid prescription. Opioids were most commonly prescribed by primary care clinicians (58.7%). Among back patients prescribed opioids, 9.8% had a risk factor. An opioid alert was triggered in 1,156 (14%) encounters, and early refill was the trigger in 50% (579) of those encounters. Of the 1,156 alerts, the prescriber cancelled or changed medications in 145 (12.5%) of those encounters. The influence of the alert on prescribing decisions was higher for overdose (16.3%) and onsite narcotic administration (29.03%).

DISCUSSION AND CONCLUSION: The proportion of alerts that influenced opioid prescribing decisions varied based on the type of trigger. Triggers that we associate with drug-seeking behavior such as overdose and onsite narcotic administration had a higher rate of prescription cancellations and medication changes.