



NEWS RELEASE

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Quality initiative reduces unnecessary IV antihypertensive use for patients with severely elevated blood pressure

Study in June/July 2023 issue of The Joint Commission Journal on Quality and Patient Safety

(OAKBROOK TERRACE, Illinois, June 15, 2023) – Asymptomatic severe hypertension, also known as hypertensive urgency, is severely elevated blood pressure (BP) that is frequently encountered in the hospital. Management with one-time doses of intravenous (IV) antihypertensives may increase adverse events such as acute kidney injury, myocardial injury or low blood pressure. Despite this, single-dose treatment remains common in emergency department (ED) and inpatient settings.

A [new study](#) in the June/July 2023 issue of *The Joint Commission Journal on Quality and Patient Safety* (JQPS) details a quality initiative launched at New York City Health + Hospitals, the largest safety net hospital system in the United States, to reduce unnecessary IV antihypertensive use.

The initiative involved two changes to electronic orders for IV hydralazine and IV labetalol across 11 hospitals from November 2021 to October 2022:

1. A nonintrusive nudge in the order instructions and an additional advisory statement with the appropriate indications and recommended assessment of alternate etiologies as a potential treatment alternative.
2. A mandatory requirement to document the indication for IV antihypertensive use.

Of the indications selected for IV antihypertensive orders, 60.7% were for hypertensive emergency, 15.3% for patients who were strictly nothing by mouth (NPO), 21.2% for other and 2.8% for more than one indication.

Findings showed for ED-only encounters, IV hydralazine orders had a 49.5% reduction, IV labetalol orders a 30.1% reduction, and aggregate IV hydralazine and IV labetalol orders a 38.7% reduction. For inpatient encounters, IV hydralazine had a 22% reduction, IV labetalol orders a 6.3% reduction, and aggregate IV hydralazine and IV labetalol orders a 13.4% reduction.

“We found that two small prompts in our electronic health record had a dramatic impact on reducing IV antihypertensive orders,” says Mona Krouss, MD, assistant vice president of Value and Patient Safety at NYC Health + Hospitals and lead author of the study. “By reducing unnecessary antihypertensive IV use, this low effort intervention likely had an impact on decreasing adverse events.”

“The intervention consisted of just two small changes to the electronic health record (EHR), which could be replicated at other institutions with minimal effort or cost,” adds an [accompanying editorial](#) by Zachary G. Jacobs, MD, assistant professor of Medicine, Division of Hospital Medicine, Oregon Health & Science University. “Given the high prevalence of elevated blood pressure in the hospital, an intervention that is inexpensive and able to scale such as this one could have significant impacts on patient safety and cost mitigation.”

Also featured in the June/July issue:

- [In Situ Simulation as a Quality Improvement Tool to Identify and Mitigate Latent Safety Threats for Emergency Department SARS-CoV-2 Airway Management: A Multi-Institutional Initiative](#) (Montefiore Medical Center and NYC Health + Hospitals, New York)
- [Reducing Inappropriate Simultaneous Ordering of Heparin Antibody and Serotonin Release Assays](#) (NYC Health + Hospitals, New York)
- [Home Health Agency Patient Experience Measures and their Relationship to Joint Commission Accreditation](#) (The Joint Commission, Oakbrook Terrace, Ill.)
- [Reducing Sharps Injuries in the Operating Rooms of an Academic Tertiary Care Center](#) (Massachusetts General Hospital, Boston)
- [Social Determinants of Health Screening and Management: Lessons at a Large, Urban Academic Health System](#) (New York-Presbyterian, New York)
- [Standardized Electronic Order Entry to Improve Enteral Nutrition Prescribing in the Critically Ill](#) (research letter)
- [Bringing Environmental Sustainability into the Quality Agenda: Time to Act on Reducing Health Care Pollution and Waste](#) (commentary)
- [No Time to Waste: A Call for Papers on Making Health Care Environmentally Sustainable](#) (call for papers)

For more information, please visit the [JQPS website](#).

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Note for editors

The article is “[Reduction of Intravenous Antihypertensives through Clinical Decision Support in a Large Safety Net System](#),” by Mona Krouss, MD; Surafel Tsega, MD; Daniel Alaiev; Joseph Talledo, MS; Komal Chandra, PhD; Peter Alarcon Manchego, MD; Milana Zaurova, MD; Dawi Shin; Mariely Garcia; and Hyung J. Cho, MD. The article appears in *The Joint Commission Journal on Quality and Patient Safety* (JQPS), volume 49, number 6/7 (June/July 2023), published by Elsevier.

The Joint Commission Journal on Quality and Patient Safety

[The Joint Commission Journal on Quality and Patient Safety](#) (JQPS) is a peer-reviewed journal providing healthcare professionals with innovative thinking, strategies and practices in improving quality and safety in healthcare. JQPS is the official journal of [The Joint Commission](#) and [Joint Commission Resources, Inc.](#) Original case studies,

program or project reports, reports of new methodologies or the new application of methodologies, research studies, and commentaries on issues and practices are all considered.