

# Modified HEDIS criteria for Lower Back Pain Better Identifies Early Intervention and Imaging Utilization in the Emergency Department Observation Unit.

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## INTRODUCTION

The Choosing Wisely Campaign identified lower back pain as an area for improvement to standardize radiographic utilization and contain costs in the ED and ED observation unit.

The Agency for Healthcare Research and Quality recommends the Healthcare Effectiveness Data and Information Set (HEDIS) criteria to guide radiographic utilization and to identify serious back injury that may or may not need intervention.

Common practice for lower back pain ED patients involves the utilization of an ED observation unit (EDOU) to provide further diagnostic testing, consultation evaluation, and treatment.

## STUDY OBJECTIVE

Our objective was to evaluate other factors related to acute lower back pain not included in the current HEDIS criteria that are related to MRI imaging, resource utilization and early procedural or surgical intervention within 30 days.

## METHODS

A multi-center retrospective cohort review of ED OU patients with a primary diagnosis of acute back pain from Jan 1, 2014 to Dec 31, 2015.

Data collection included patient demographics, imaging performed, back surgical history.

2012 HEDIS criteria including history of back trauma, IVDA, cancer, or presence of a neurologic deficit.

Statistical analysis included univariate and multivariate analysis to identify statistical significance ( $p < 0.05$ )

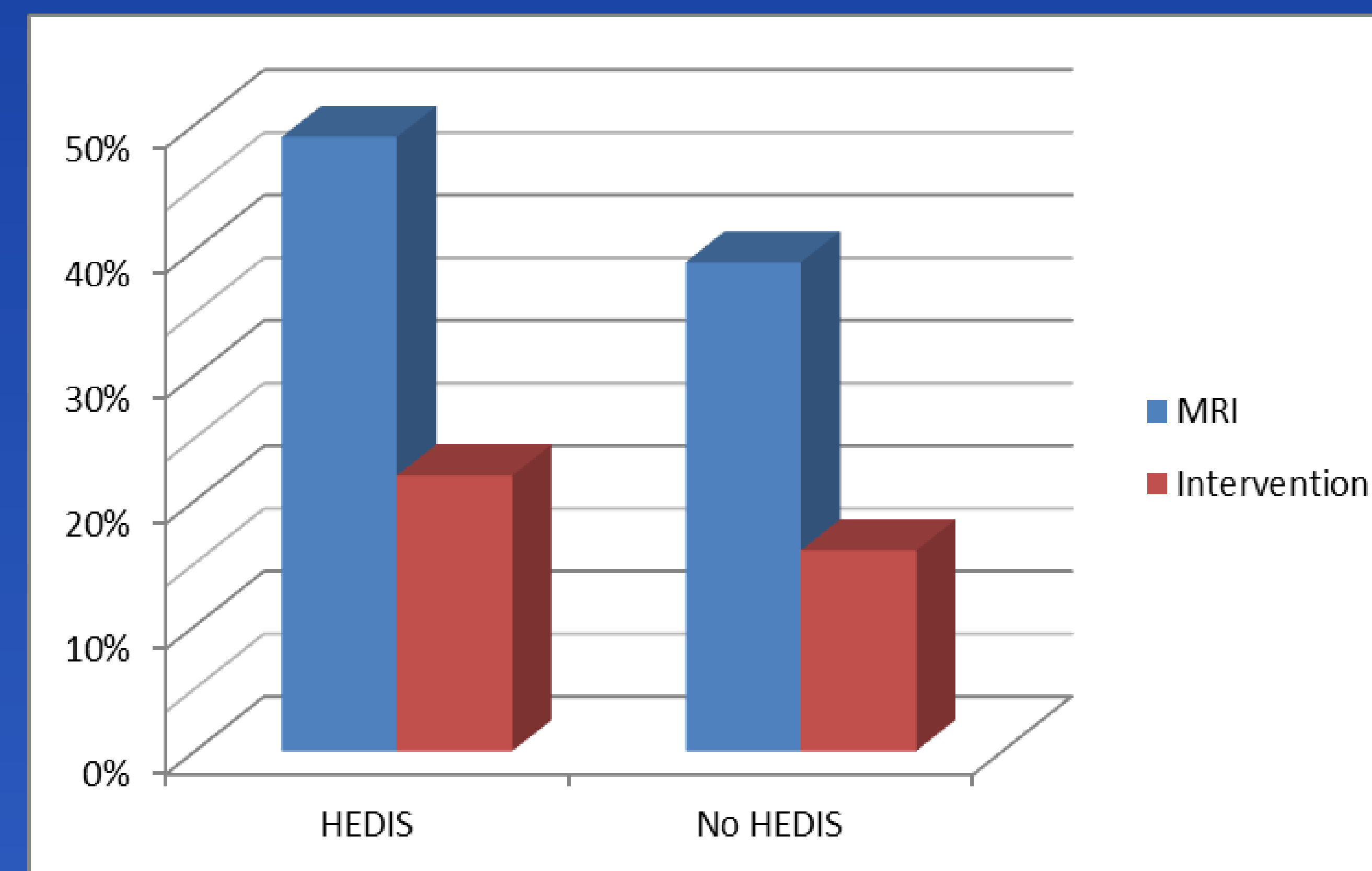
## RESULTS

N = 280 ED OU patient

Age 57.8 / Female 63.9% / White 66.4%

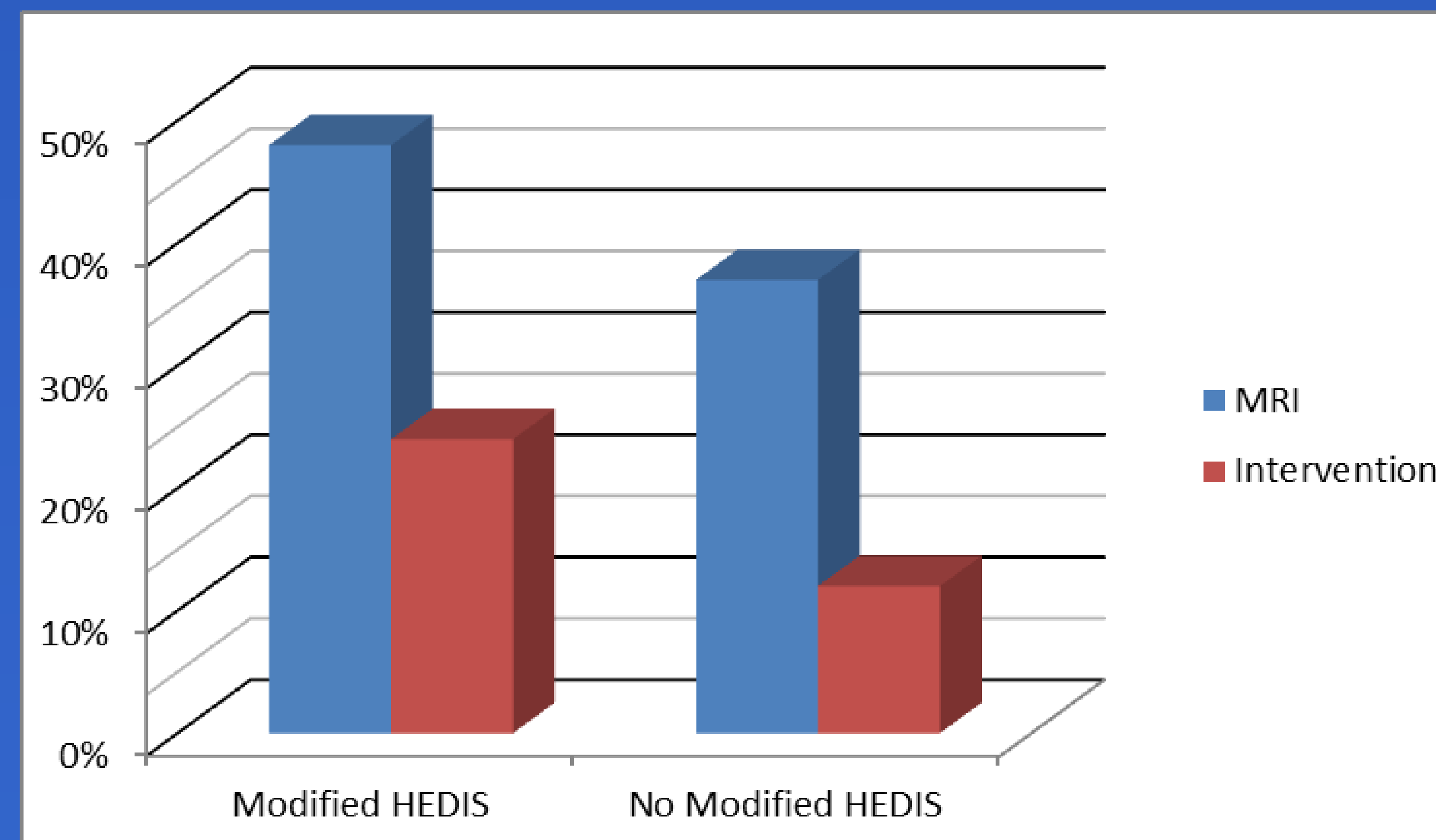
Pain 10/10 & Hx of Back Surgery were associated with early intervention, ( $p = 0.01$  and  $p = 0.001$ )

HEDIS criteria n=106 / Non HEDIS criteria n=174



Patients with and without 2012 HEDIS criteria; MRI utilization  $p = 0.08$ , Intervention  $p > 0.05$

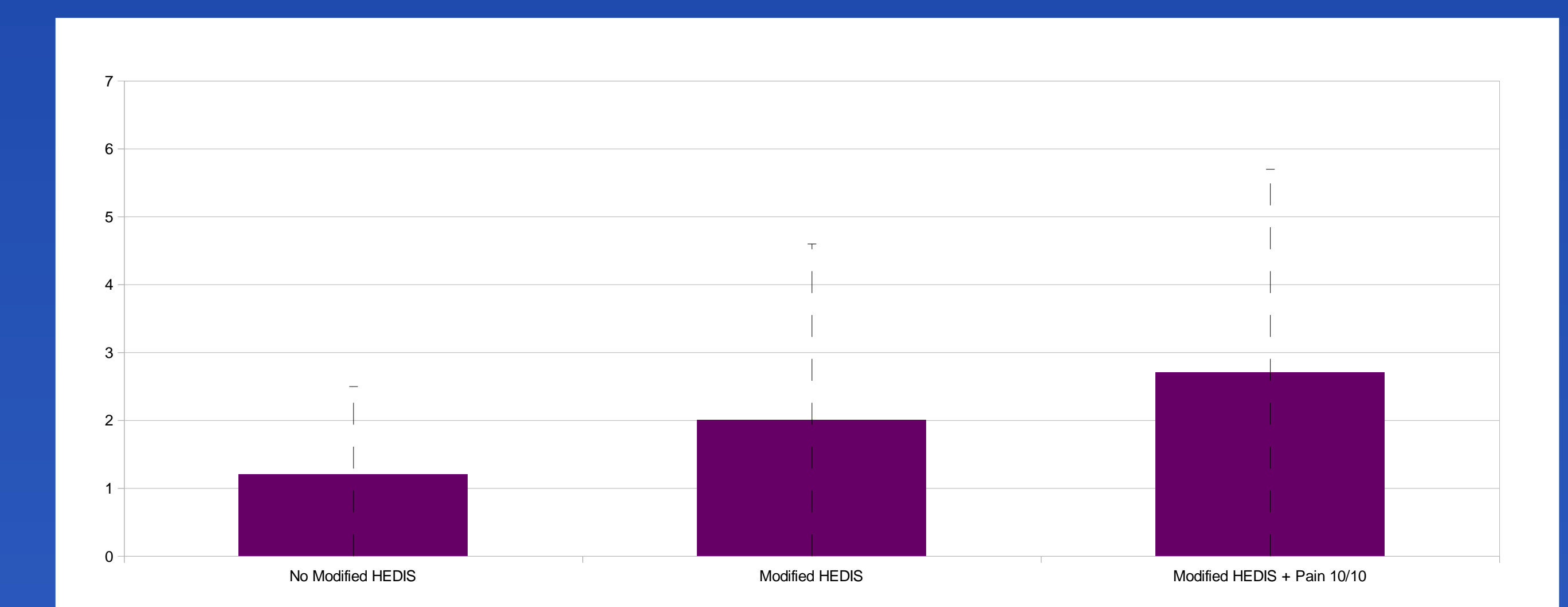
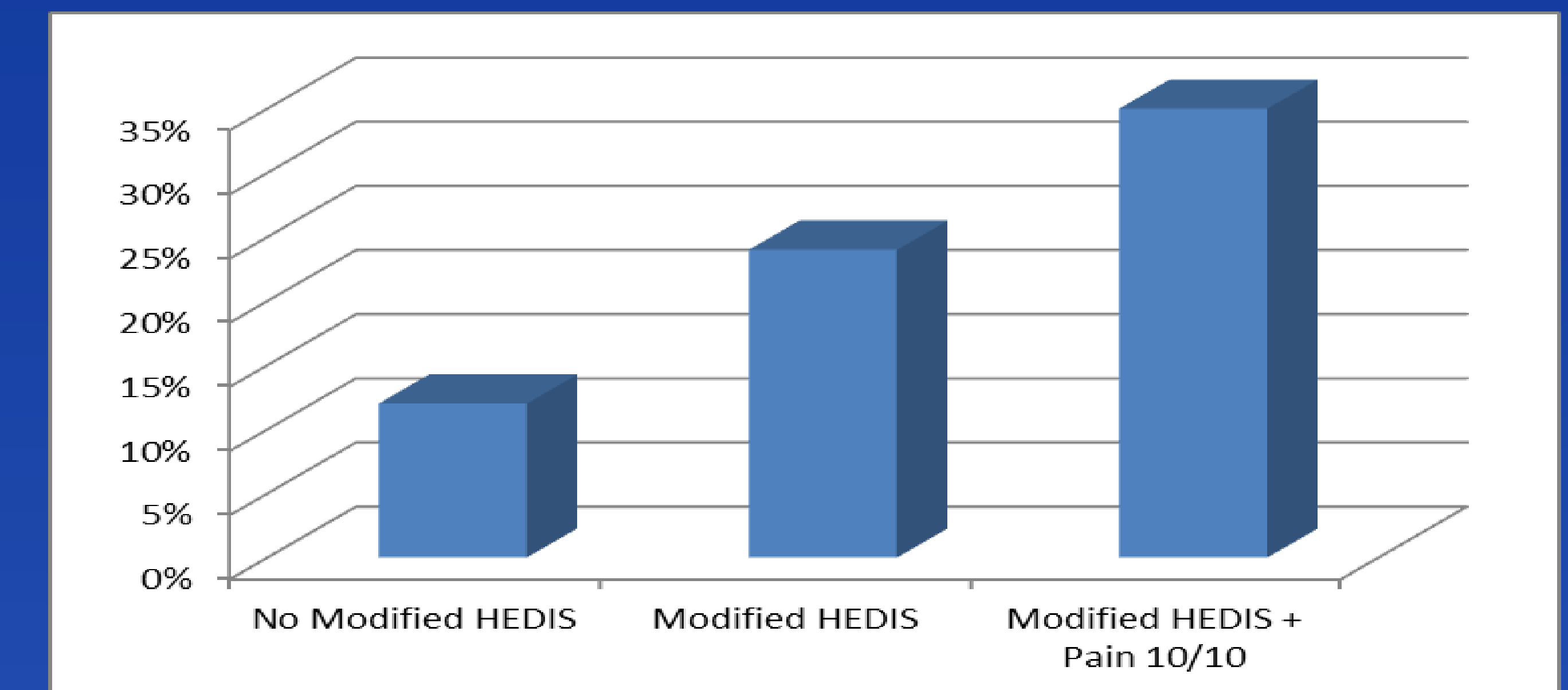
N = 137 modified HEDIS criteria / 143 No Mod HEDIS



Patients with and without Modified HEDIS criteria; MRI utilization  $p < 0.05$ , Intervention  $p = 0.02$ , Length of Stay  $2.0 \pm 2.6$  days vs  $1.2 \pm 1.3$  days ( $p < 0.01$ ).

## RESULTS

Prevalence of Early Procedural or Surgical Intervention



Comparative Length of Stay in days

## CONCLUSION

2012 HEDIS criteria was not associated with MRI utilization or early intervention.

We identified severe lower back pain rated 10/10 and a history of back surgery.

The proposed modified HEDIS criteria was associated with higher MRI utilization, early intervention, and longer length of stay.

The highest risk lower back pain group was identified that presented with a positive modified HEDIS criteria as well as a pain score 10/10 at ED presentation and may better identify ED/EDOU patients requiring emergent imaging and early intervention.

## REFERENCES

<http://www.qualitymeasures.ahrq.gov/content.aspx?id=48635#Section583>