

VALIDITY OF CODE-BASED RECORDING OF ALCOHOL INTOXICATION AMONG STUDENTS PRESENTING TO A UNIVERSITY HOSPITAL EMERGENCY DEPARTMENT

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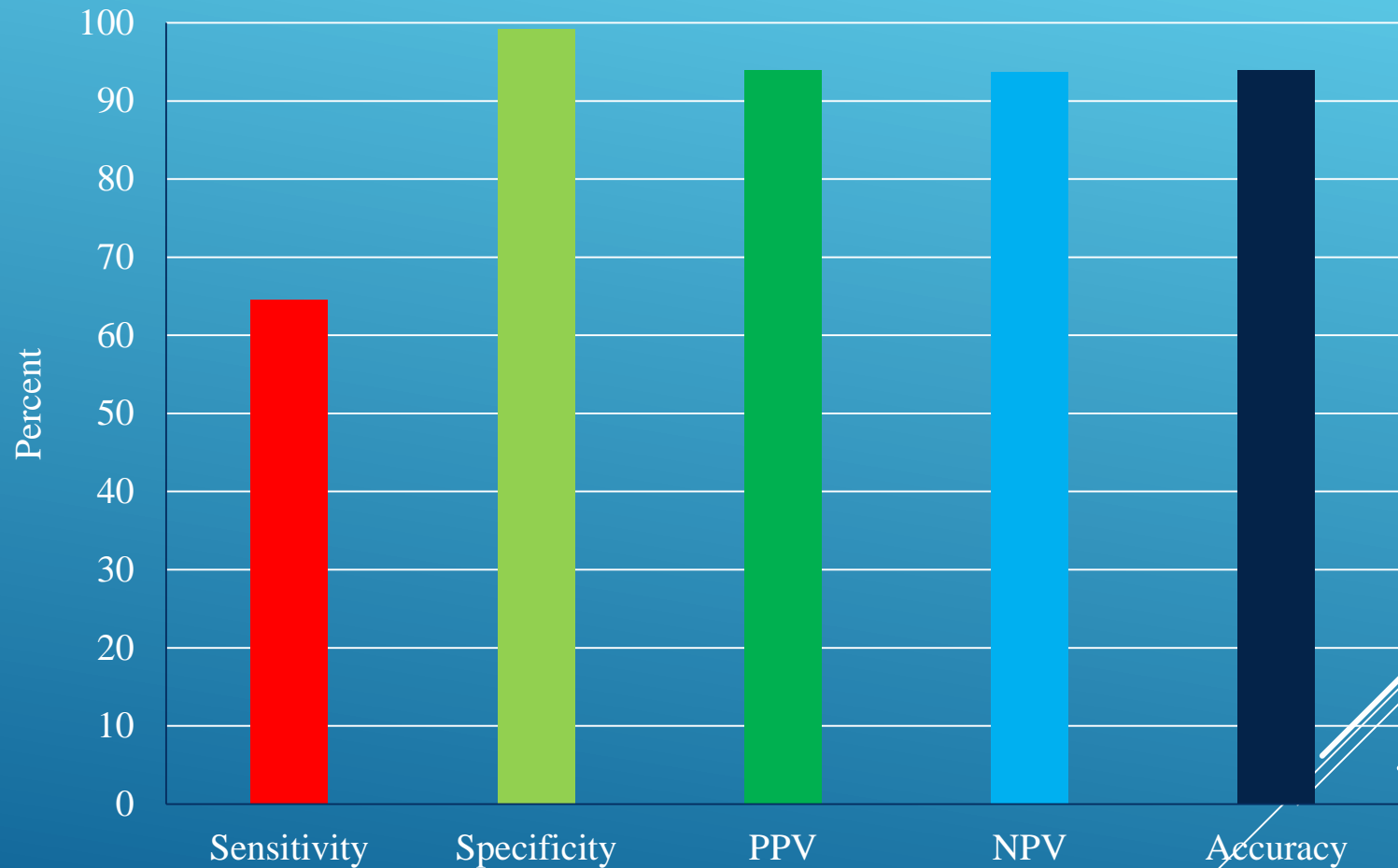
BACKGROUND AND METHODS

- This study evaluated the accuracy and completeness of diagnostic codes in recording ED visits due to alcohol intoxication among college students presenting to an ED
- The ED electronic medical records from 6 academic years 2010 to 2015 were queried for student visits
- 600 clinical records of student visits were randomly selected (100 records each year) for chart review to identify visits with alcohol intoxication
- Results were then compared with ICD-9 diagnostic codes indicating alcohol intoxication (30500, 30052, and 3030)
- Sensitivity, specificity, positive/negative predictive values, and accuracy were calculated using the chart review as the 'gold standard'.

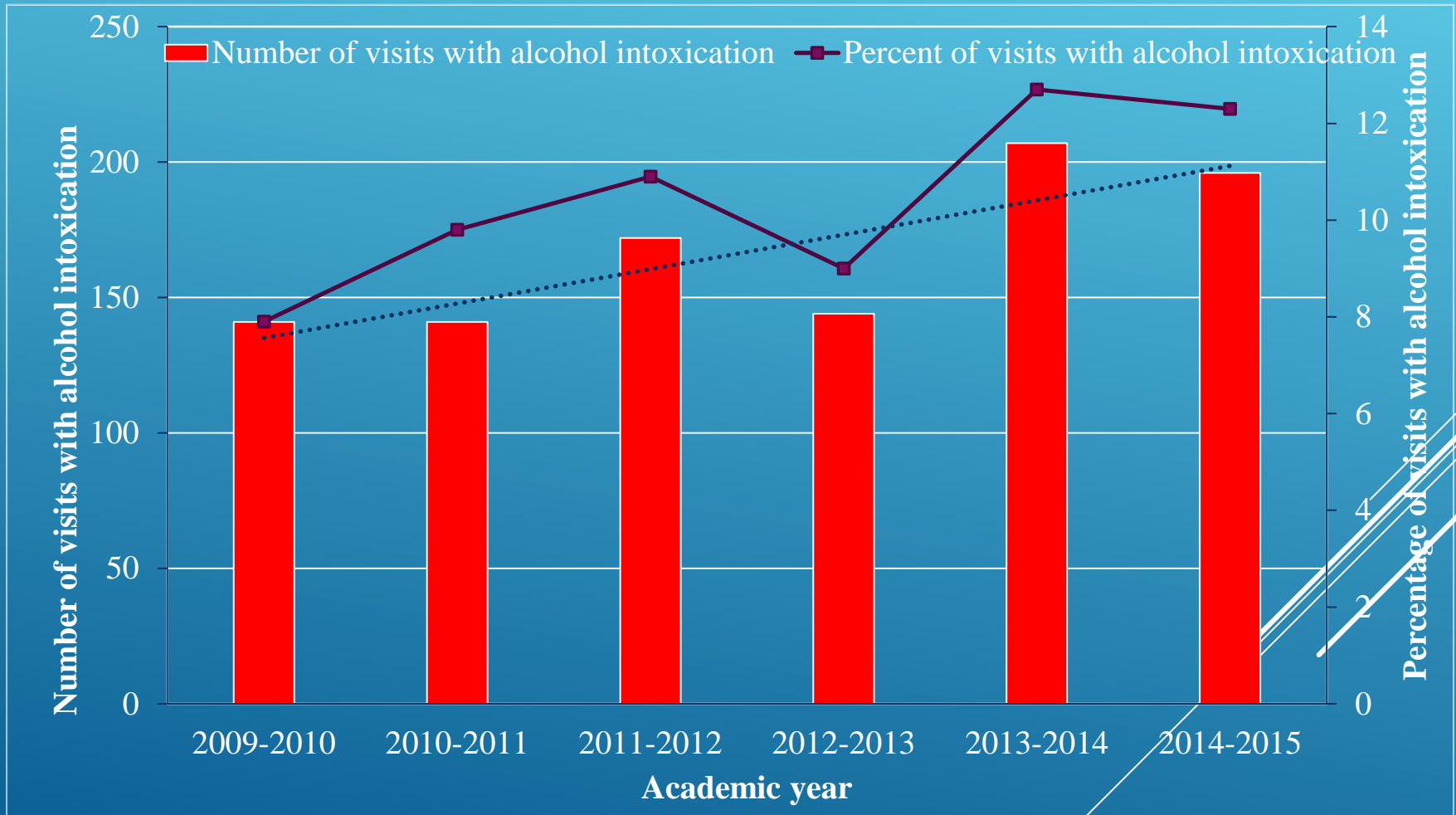
KEY FINDINGS

- There were **9,616** student visits (48% males) to ED with **1,001** (10.4%) visits due to alcohol intoxication
- Two thirds of ED visits with alcohol intoxication had a co-occurring diagnosis with injuries (24%) being the most common condition
- In the sample reviewed, the use of ICD-9 diagnostic codes identified 64 visits (10.6%) with alcohol intoxication, while the chart review identified 96 visits (16%) with alcohol intoxication
- Sensitivity was 65%, indicating that ICD-9 diagnostic codes only captured 65% of the total ED visits with alcohol intoxication in the review sample
- The specificity, positive predictive value, negative predictive value, and accuracy were 99%, 94%, 94%, and 94%, respectively
- There were 41 visits which involved both alcohol intoxication and injury or trauma, of which alcohol intoxication diagnostic codes were provided in only 18 visits (44%).

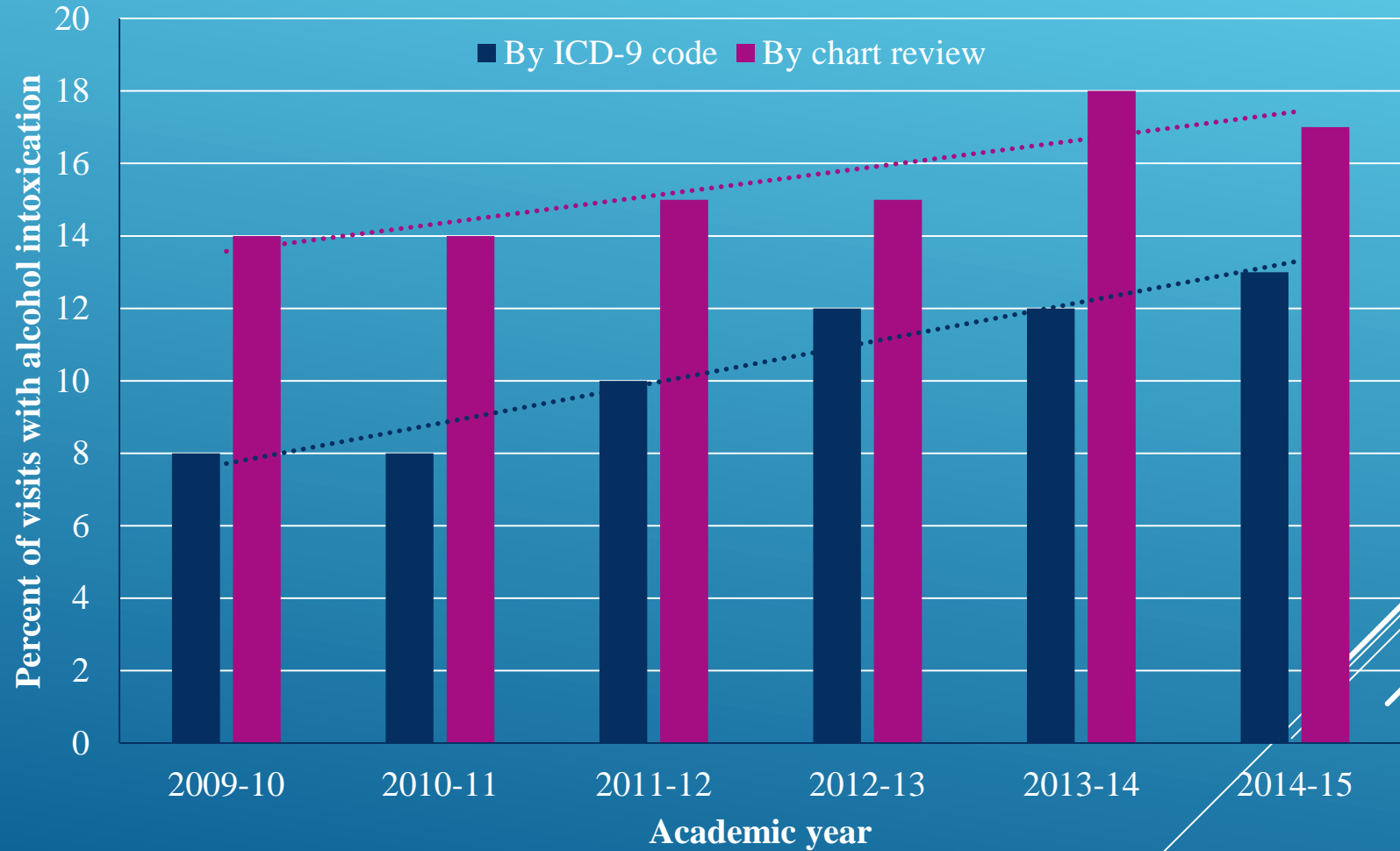
VALIDITY AND ACCURACY OF ICD-9 CODES



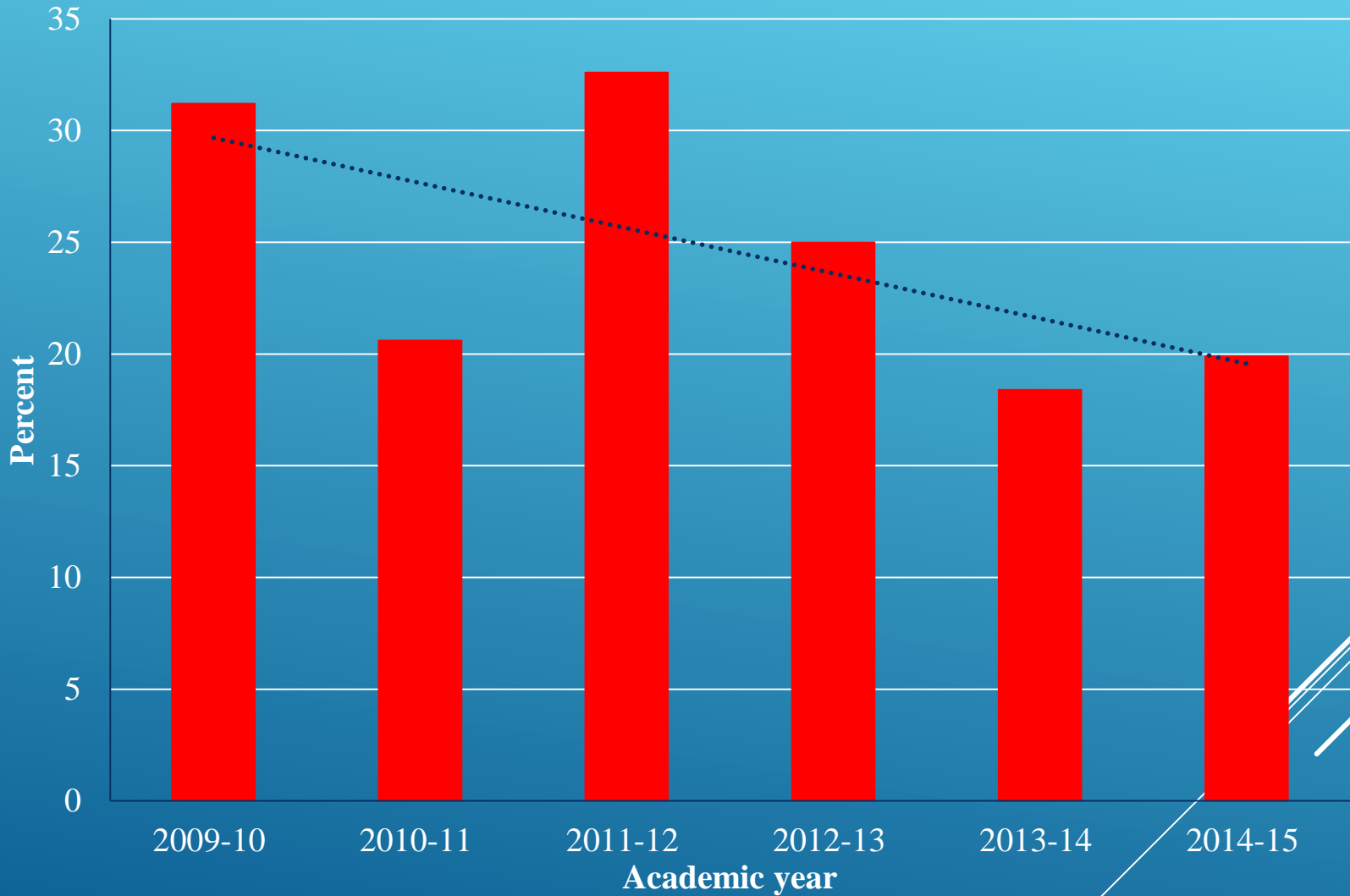
NUMBER AND PERCENT OF ED VISITS WITH ALCOHOL INTOXICATION IN THE STUDY POPULATION



PERCENT OF ALCOHOL INTOXICATION IN THE REVIEWED SAMPLE



PERCENT OF CO-OCCURRING INJURIES



DISCUSSION AND CONCLUSION

- Code-based recording of student ED visits due to alcohol intoxication had a high level of accuracy, but over one third of ED visits due to alcohol intoxication were not captured by diagnostic codes
- When the visit also involved injury or trauma, only less than half were given a diagnostic code for alcohol intoxication
- The rising trend in percent in alcohol intoxication identified by ICD-9 is consistent with the trend identified from the chart review, indicating that code-based assessment is valid in evaluating the trend over time
- A declining trend in percent of injuries suggests that compared to past years, more student ED visits with alcohol intoxication were actually given a diagnostic code for alcohol intoxication and/or more intoxicated students without an injury were presenting to the ED
- ED electronic datasets can be a reliable information source for evaluating the burden of alcohol intoxication among students; however, these datasets could be improved with more complete ICD coding by ED physicians