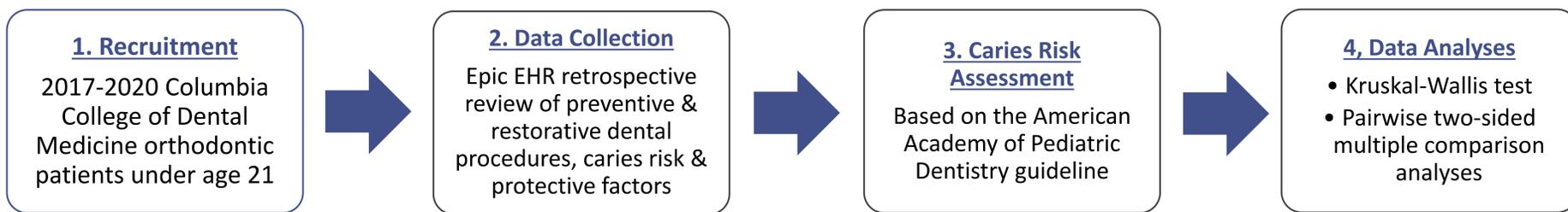


## INTRODUCTION

- Orthodontic treatments can exacerbate caries (e.g. white spot lesions) due to difficulty in maintaining adequate oral hygiene around orthodontic appliances<sup>1</sup>. This can lead to accumulation of dental plaques<sup>2</sup>, changes in the microbial environment and pH balance favorable for demineralization<sup>3</sup>.
- Dental clearance guarantees that a patient is caries-free at the start of orthodontic treatment, but only provides partial information on the risk level of the patient.
- Preventive measures and advice offered by orthodontists are limited and inconsistent<sup>1</sup>

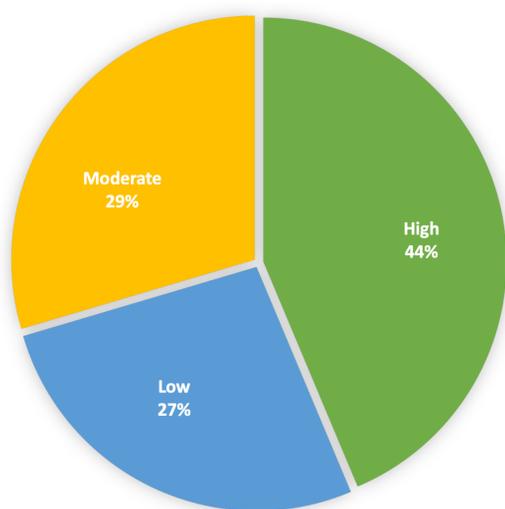
**Objective: Assess the feasibility of retrospective dental chart review in predicting caries progression during orthodontic treatment**

## MATERIALS & METHODS

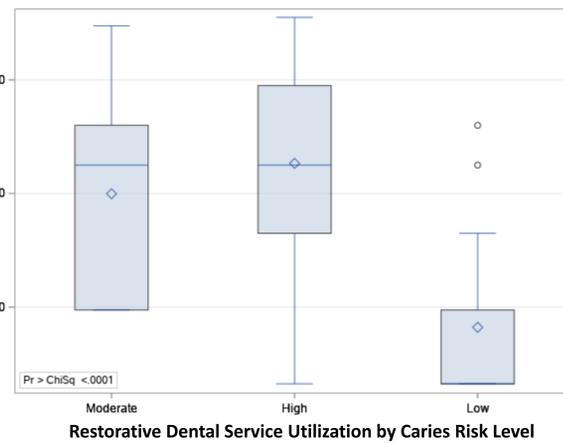
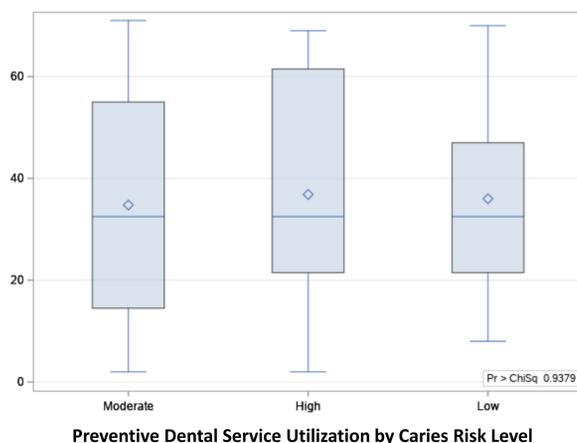


## RESULTS

**Caries Risk Distribution**



Caries Risk Level	# of Patients
Low	19
Moderate	21
High	31



- 71 patient charts reviewed
- 33% of patients received preventive dental care after initiating orthodontic treatment
- 14% of patients received restorative dental treatment after initiating orthodontic treatment
- Preventive service use during orthodontic treatment was similar across the three caries risk groups
- **Restoration service use during orthodontic treatment was significantly lower (p < 0.0001) among low caries risk group than moderate and high caries risk groups**

## DISCUSSIONS & CONCLUSIONS

### Pre-orthodontic caries risk and dental care experience predict caries progression during orthodontic treatment

- Results of this study highlight the feasibility of retrospective dental chart review in facilitating individualized patient care (i.e. tailoring preventive measures and recall intervals based on risk profile)
- Further research with larger sample size and longer follow-up period needed before concluding potential utility in clinical setting.
- Future research should address the observed decline in preventive and restorative dental care by patient during orthodontic treatment.

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