INTRODUCTION

- Melatonin is a popular over-the-counter sleep medication.
- The Indiana Poison Center received 5,896 calls regarding melatonin ingestions (2015–2021).
- Project Objective: To conduct surveillance on on-market pediatric melatonin products, associated public perspectives and reported ingestion cases.

RESULTS/FINDINGS

NIH Data
- Most common formulation: tablets
- Top ingredient, other than melatonin: stearic acid
- Combining ingredients, such as serotonin, can bring serious side effects
  - 82% of labels included the term "before bedtime"
  - 40% stated to consult with a physician prior to use
  - 10.5% included a specific usage length
- Dosage ranged from 0.5mg to 20mg

Poison Center Data
- Male was the gender with the most ingestions
- 2 and 3 year olds had the most ingestions

RESULTS/FINDINGS

Amazon Text and Images
- Most common formulation: tablets
- Top ingredient, other than melatonin: cellulose
- Over 30% of products had no warning label
- Dosage ranged from 0.5mg to 60mg
- Commonly reported side-effects are nightmares, headache, stomachache, sickness, hallucination, fear of sleeping, heart race/burn, dizziness
- Of 27 products, there was most concern with:
  - Side effects of Zarbee’s 1 mg melatonin gummy
  - Ingredients of Luna’s vegan tablet sleep supplement

Reddit
- Caregivers on Reddit:
  - Most commonly discussed child sleep behaviors
  - Suggested melatonin as a potential solution
  - Did not report side-effects of melatonin use

METHODOLOGY

Data Collection
- Data was used and focused on 347 melatonin products
- Text from Amazon’s “Important information” and “Product details” section
- Includes 37 children’s melatonin products with >3,500 reviews

Analysis
- NLP Topic modeling and sentiment analysis was done
- Attributes such as ingredients and formulation methods’ distributions were visualized

ACKNOWLEDGEMENTS

Thank you to our Corporate Partner Mentor Dr. Deb Spoerner, Dr. Adam Overberg, Dr. Ward, Maggie Betz, Josh Lefton and the Data Mine staff members for supporting our work.