

Comparison of Clinical Presentations and Burden of Respiratory Syncytial Virus in Infants Across Three Distinct Healthcare Settings

SCHOOL OF MEDICINE

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1. INTRODUCTION

- Respiratory syncytial virus (RSV) accounts for the majority of lower respiratory tract infections (LRTI) in hospitalized infants.
- In the United States, hospitalizations are well defined; yet, visits in the emergency department and outpatient settings are underrecognized.
- We aimed to evaluate the burden of RSV across three distinct healthcare settings during one respiratory season.

2. METHODS

- We conducted a prospective RSV surveillance study among infants (<1 year) in Davidson County, Tennessee from December 16, 2019-April 30, 2020.
- Infants were enrolled if they presented to an inpatient, emergency department, or one of four outpatient clinics with either fever and/or:

Upper respiratory symptoms

- Cough
- Earache
- Nasal Congestion
- Rhinorrhea
- Sore throat

Lower respiratory symptoms

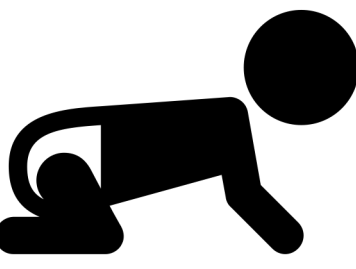
- Wheezing
- Crackles
- Rales
- Diminished breath sounds
- Shortness of breath

- Demographic and illness history were collected during parental/guardian interviews, followed by medical chart abstractions.
- Nasal swabs were collected and tested for RSV using Luminex® NxTAG RPP.

- **Enrollment at three outpatient clinics ceased due to the COVID-19 pandemic on March 16, 2020.**

3. RESULTS

627 infants screened



- 473 (75%) confirmed eligible
- 364 (77%) enrolled
- 361 (99%) specimens tested

RSV-positive children by setting



- 37 (51%) inpatient
- 18 (34%) emergency department
- 46 (20%) outpatient clinic

Figure 1. Davidson County Infants with RSV by MMWR week and Healthcare Setting (n=101)

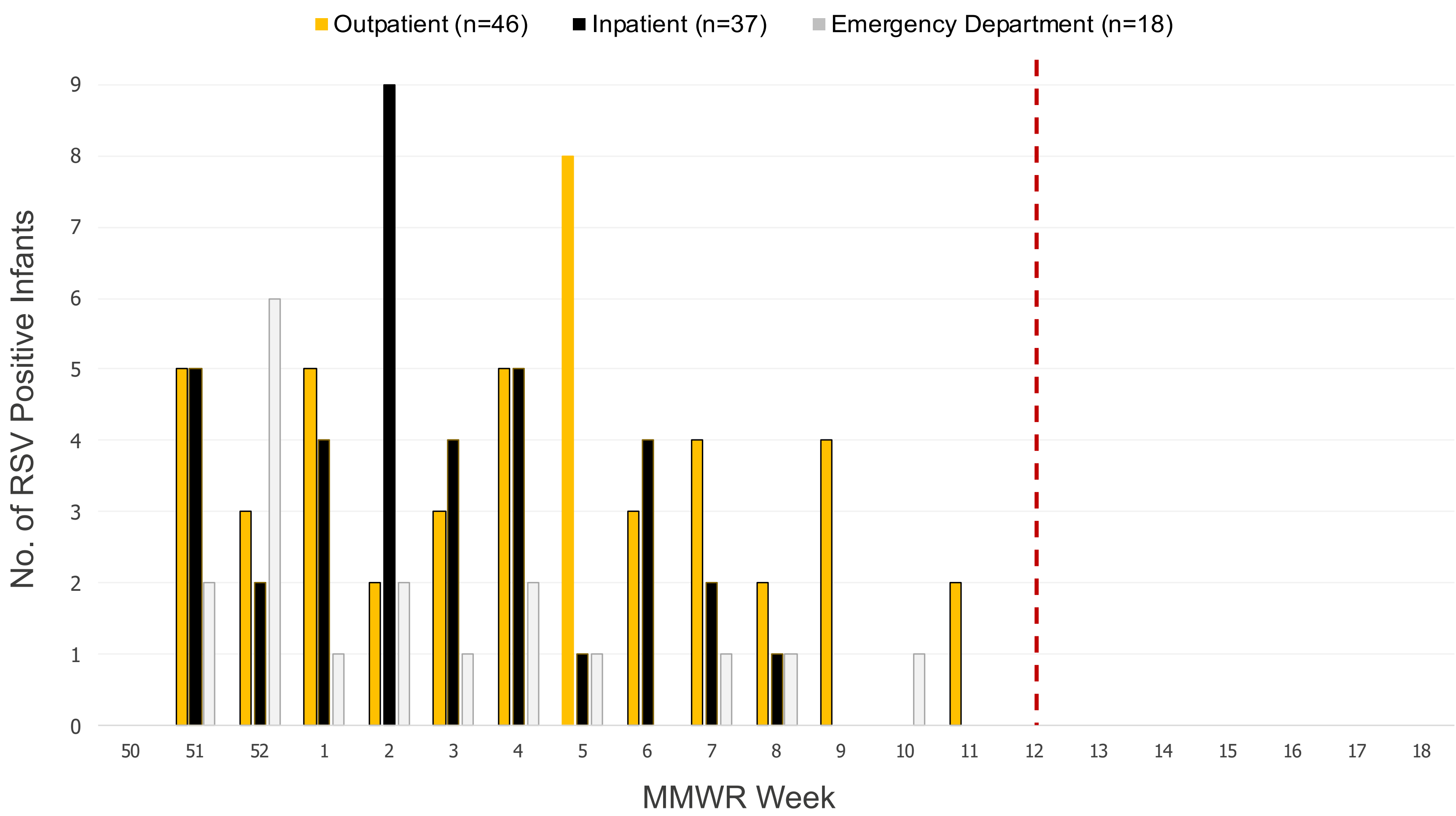


Figure 2. Proportion of Davidson County Infants with RSV Showing each Clinical Symptom, by Healthcare Setting

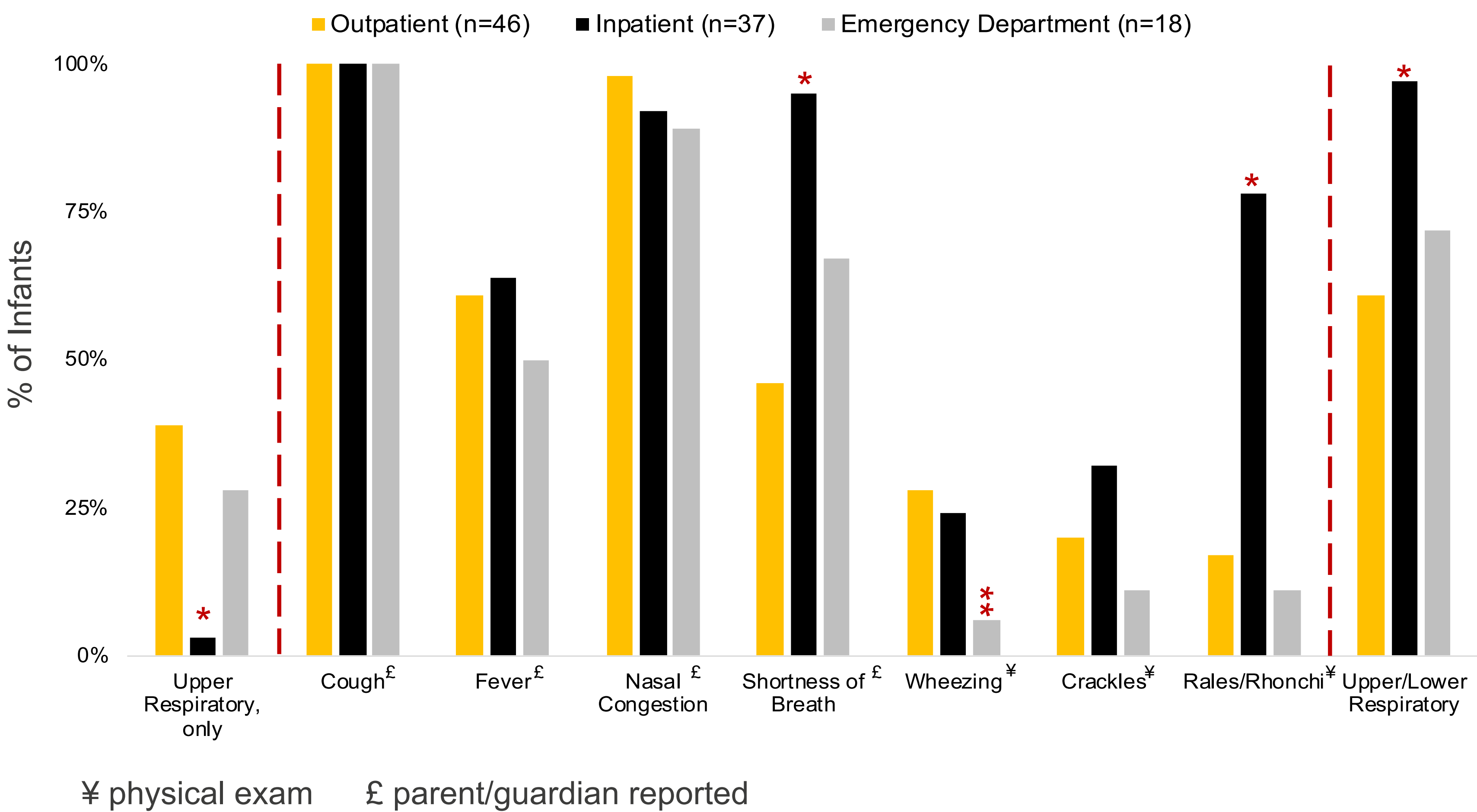
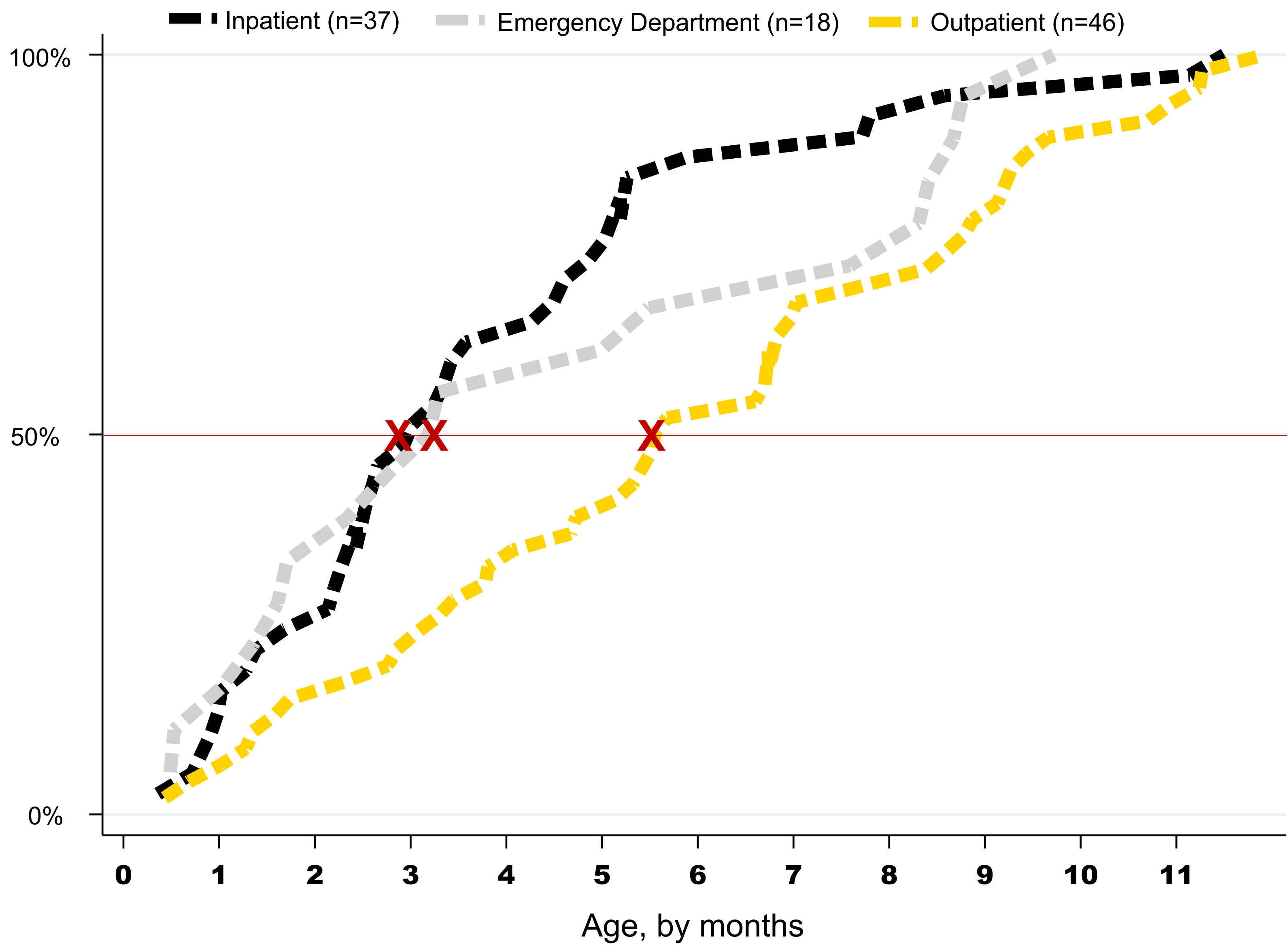


Figure 3. Cumulative Enrollment of Davidson County Infants with RSV by Age in Months and Healthcare Setting (n=101)



4. CONCLUSIONS

- Two-thirds of RSV, positive infants sought care from either an outpatient or emergency department setting.
- The underutilization of diagnostic testing in the outpatient setting may underestimate the burden of RSV.

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