

UC Davis
Infectious Diseases

Title

COVID-19 Inpatient Employee Epidemiologic Investigation: Discovering the Trends

Permalink

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Data Availability

The data associated with this publication are not available for this reason: N/A

INTRODUCTION

- Epidemiologic investigation used to make policy changes and prevent future spread
- Timely and accurate investigation vital for staff and patient safety

OBJECTIVES

- Use epidemiologic investigation to discover cohorts and track exposure trends of employees
- Actively assess and evaluate sources of spread and methods to mitigate future spread

METHODS

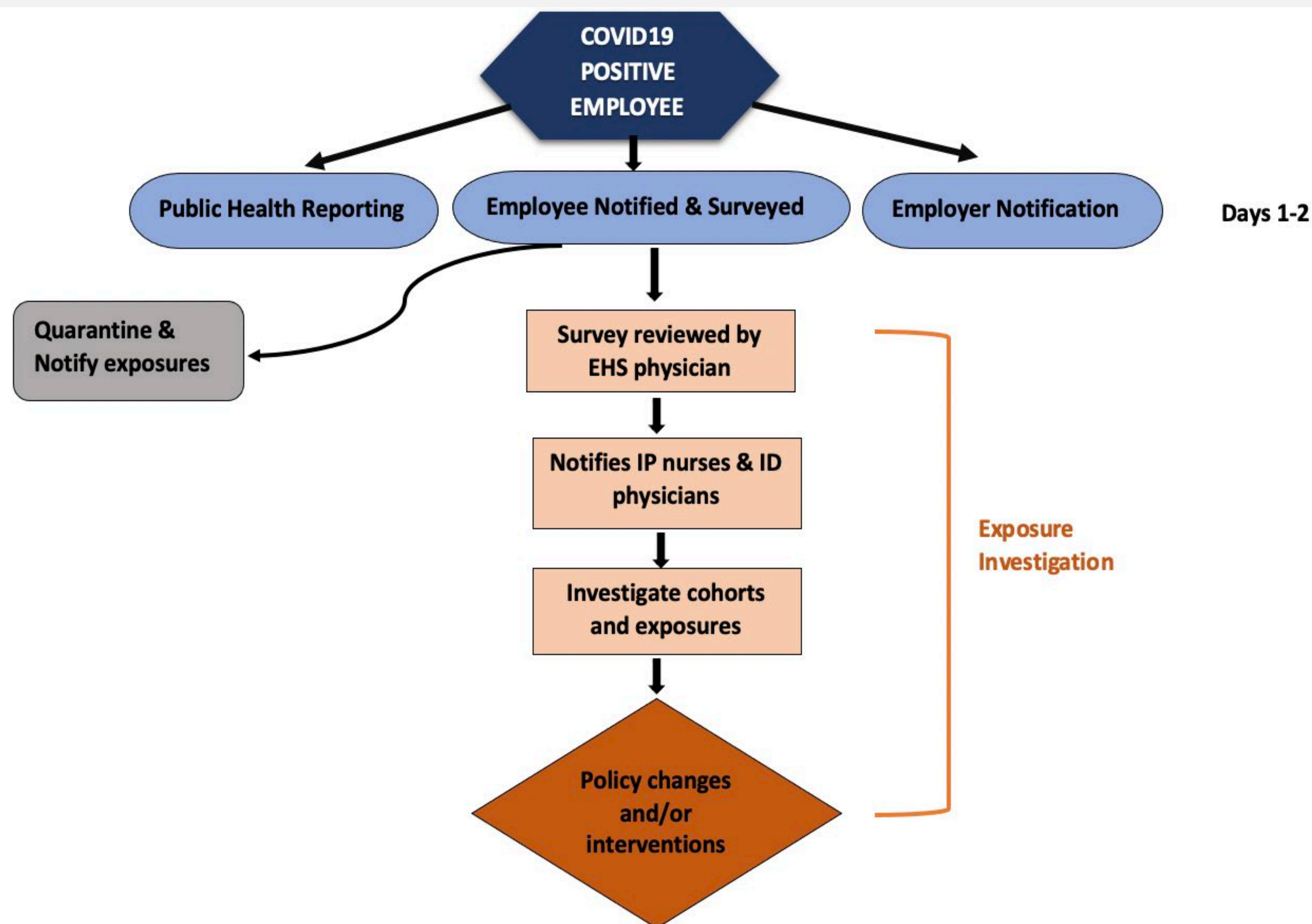


Figure 1: Epidemiologic investigation workflow for positively tested employee

PRELIMINARY RESULTS

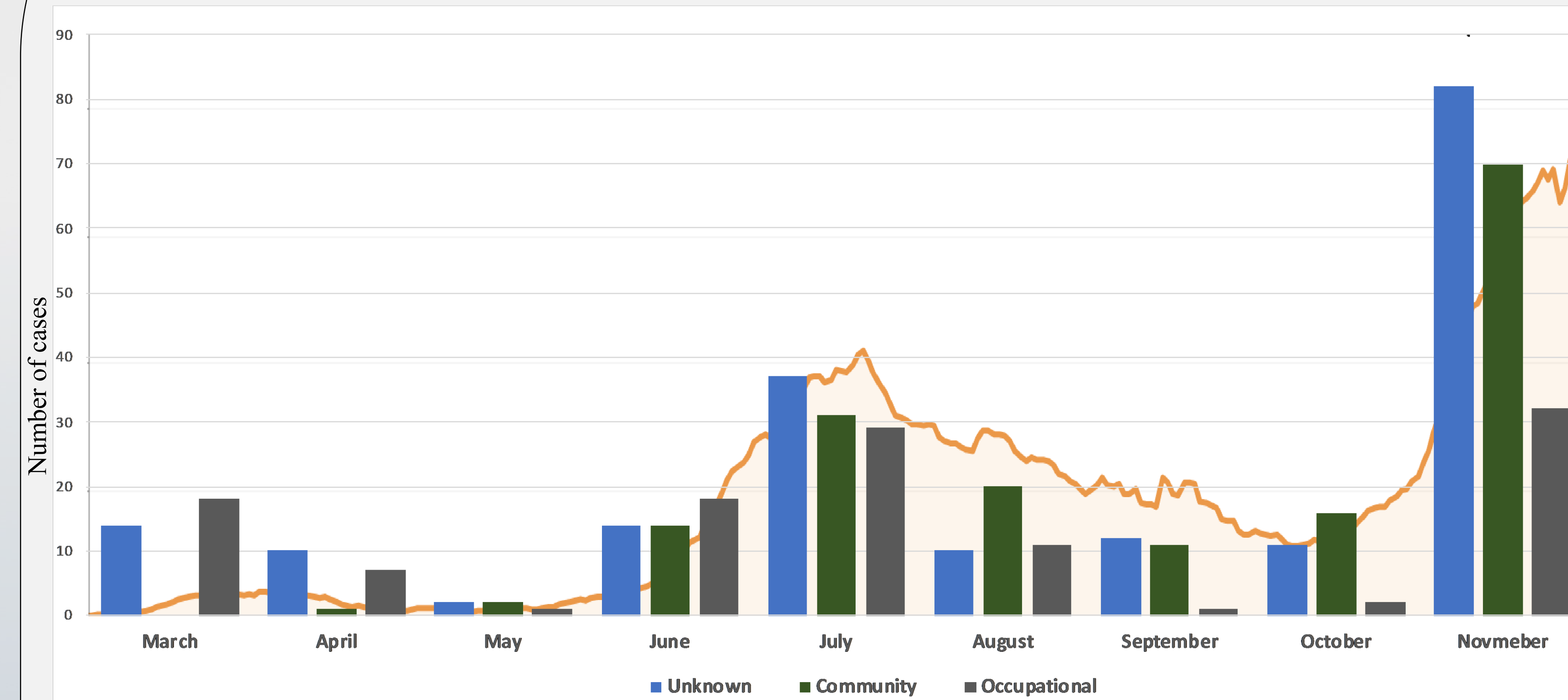


Figure 2 : Source of COVID-19 in employees from March – November 2020, categorized by unknown, community, or occupational. Orange graph overlay is Sacramento County case rate trend during this period (not to scale)⁵

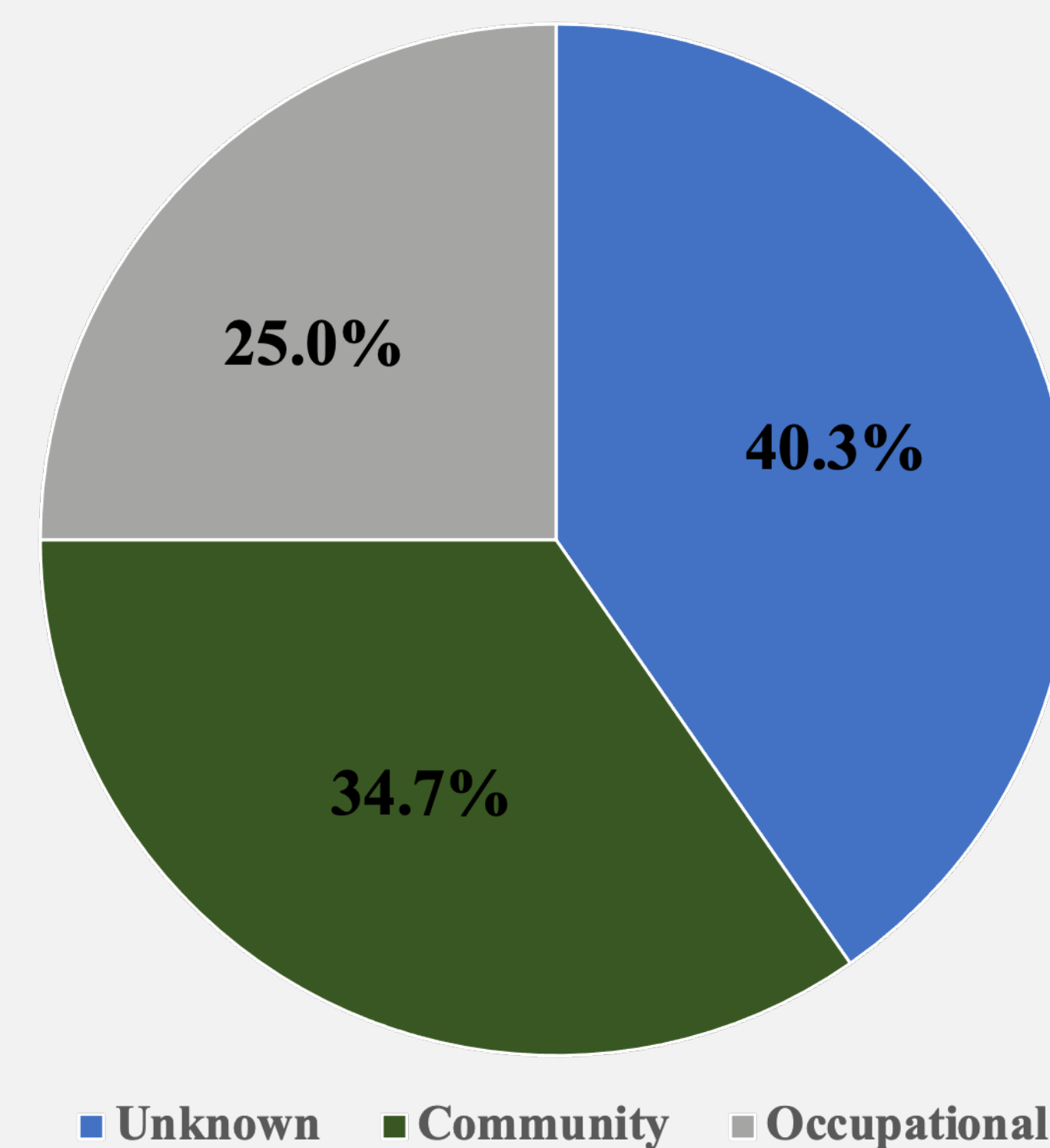


Figure 3: Breakdown of percentages for exposure source categories

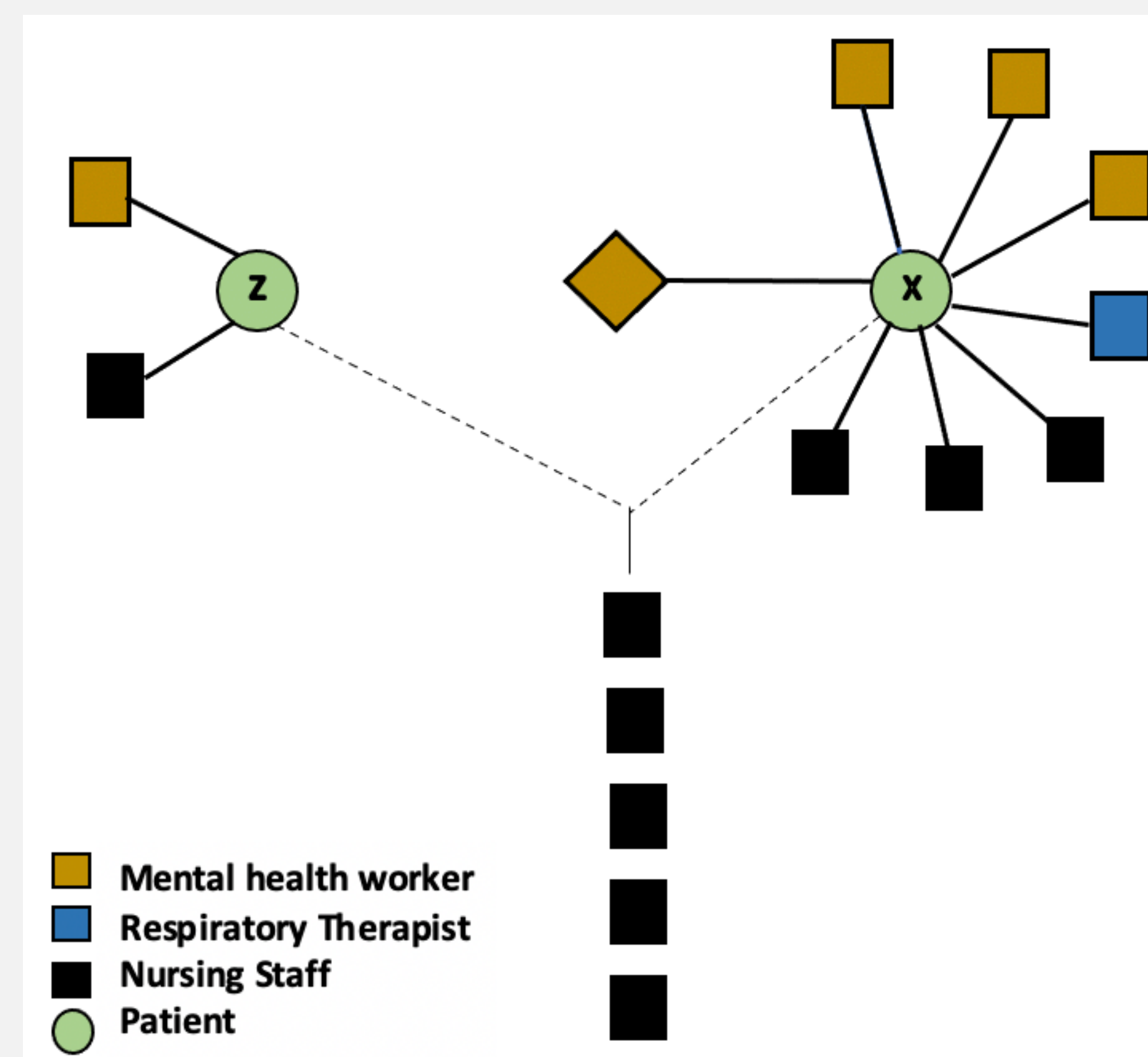


Figure 4: Map of outbreak on inpatient floor. Yellow diamond represents employee source who infected patient X, leading to further spread to contacts

LIMITATIONS

- Recall biases from employee interview and survey
- Patient contact lists from EMR limits the capture of which employees had contact and which can input data into the EMR
- Limited knowledge of contact duration
- Delay in employee interview by infection prevention team

FUTURE WORK

- Collective analysis of exposure trends from all cohorts and continued implementation of hospital policies.
- This work could encourage discussion of hospital models for future outbreaks.
- Rates of employee and patient nosocomial transmission of COVID-19 after vaccinations of employees.

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