

## ABSTRACT

- In March 2020, the Children's Hospital of Philadelphia (CHOP) created a contact tracing center (CTC), leveraging the region's Poison Control Center (PCC), Infection Prevention and Control (IPC) and Occupational Health (OH) resources and expertise.
- The CTC utilizes re-deployed healthcare workers from various departments across CHOP to identify exposed patients and employees, provide testing guidance, schedule and offer post-exposure counseling to employees.
- Exposure data for employee to patient exposures (EPE) from March-Aug were tracked and analyzed to determine COVID-19 transmission events for pediatric patients.
- One secondary exposure transmission event occurred due to EPE
- EPEs decreased after the institution of universal masking

## INTRODUCTION

- Contact tracing is a critical component in controlling the spread of infectious diseases. During the COVID-19 pandemic, the demands for contract tracing far exceeded the resources available to IPC programs.
- Leveraging our PCC, our organization established a Contact Tracing Center (CTC) with content expertise and oversight by IPC and Occupational Health.
- The CTC identifies exposed patients and employees, provides testing guidance and scheduling, and offers post-exposure recommendations for employees.
- We describe patient outcomes due to employee exposures in a pediatric healthcare system.

Impact of masking/eye protection on close contact exposures (being within 6 feet of infected person for >15 minutes, >5 minutes for aerosol-generating procedure)		Exposed Person		
		Masked with Protective Eyewear	Masked without Protective Eyewear	Unmasked (with or without protective eyewear)
Infected Patient	Masked	No risk	Low risk	Low risk
	Unmasked without concerning symptoms	Low risk OR Mitigated risk (See below guidelines)	Low risk	Concerning risk
	Unmasked with concerning symptoms	Low risk OR Mitigated risk (See below guidelines)	Concerning risk	Concerning risk

## METHODS

- Exposure data about employee to patient exposures (EPE) were captured real-time by scripted telephone interviews by our CTC.
- Chart review was performed to determine outcomes of exposed patients.
- A concerning exposure from a direct patient care provider to a patient was defined as unprotected contact at less than 6 feet for greater than 5 minutes (changed to 15 minutes starting in July) in the 24 hours prior to developing symptoms.
- Data elements tracked included, exposure risk classification (low vs. concerning), exposure window, and symptom onset.
- Data were analyzed to determine COVID-19 transmission rates for children exposed to pre-symptomatic vs symptomatic employees.

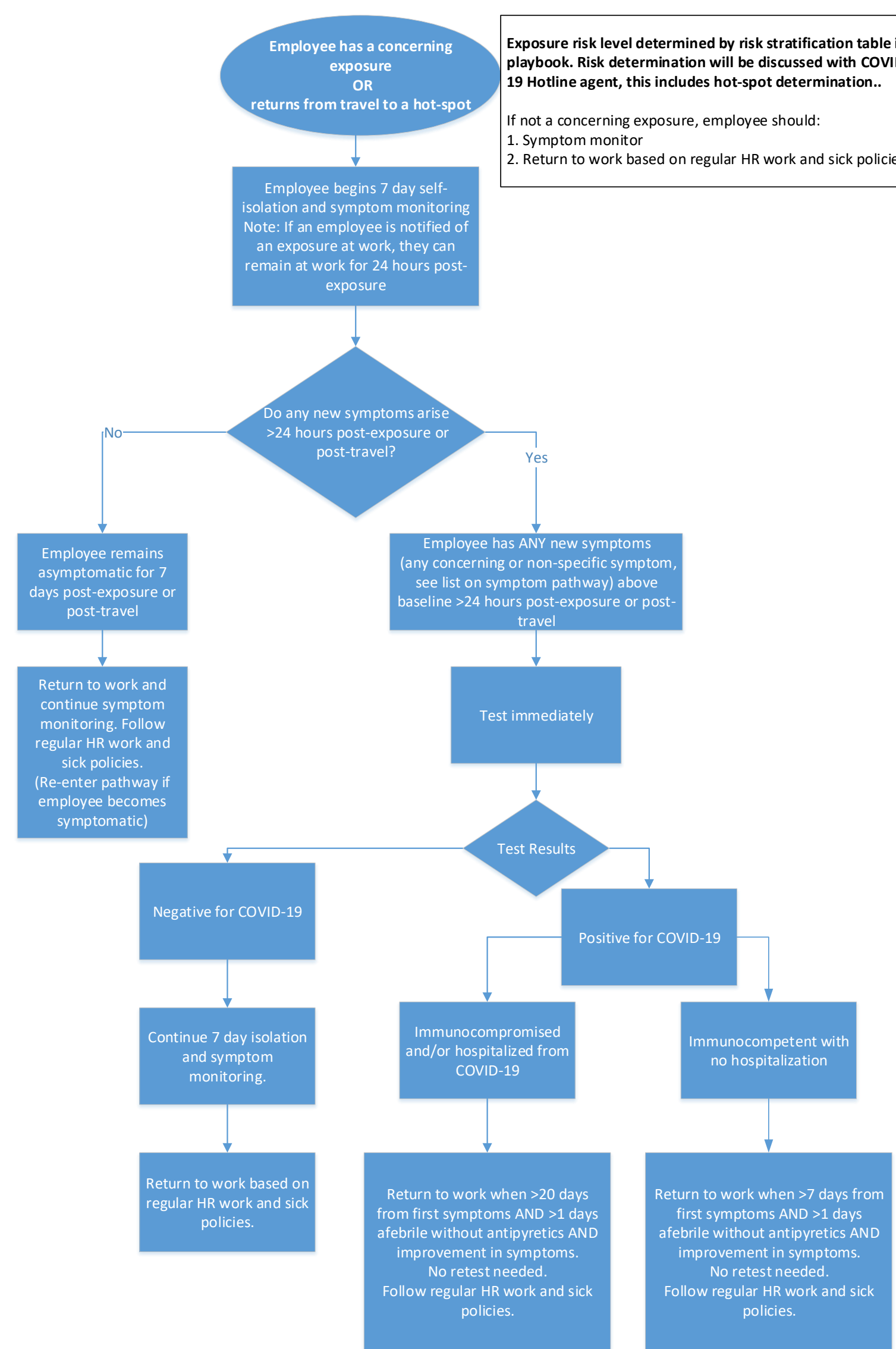


Fig 1. Post Exposure Pathway

## RESULTS

- From March 2020 – August, we identified 40 EPE that involved 11 employees; 27 EPE were pre-symptomatic and 13 EPE symptomatic exposures.
- The average number of EPE per employee was 3.67 (SD 2.77).
- There was one identified secondary transmission event to a patient from a symptomatic employee post universal masking; the patients caregiver was subsequently infected by the patient.
- After instituting universal masking, the number of concerning exposures to patients were 5 compared to 35 prior to universal masking.

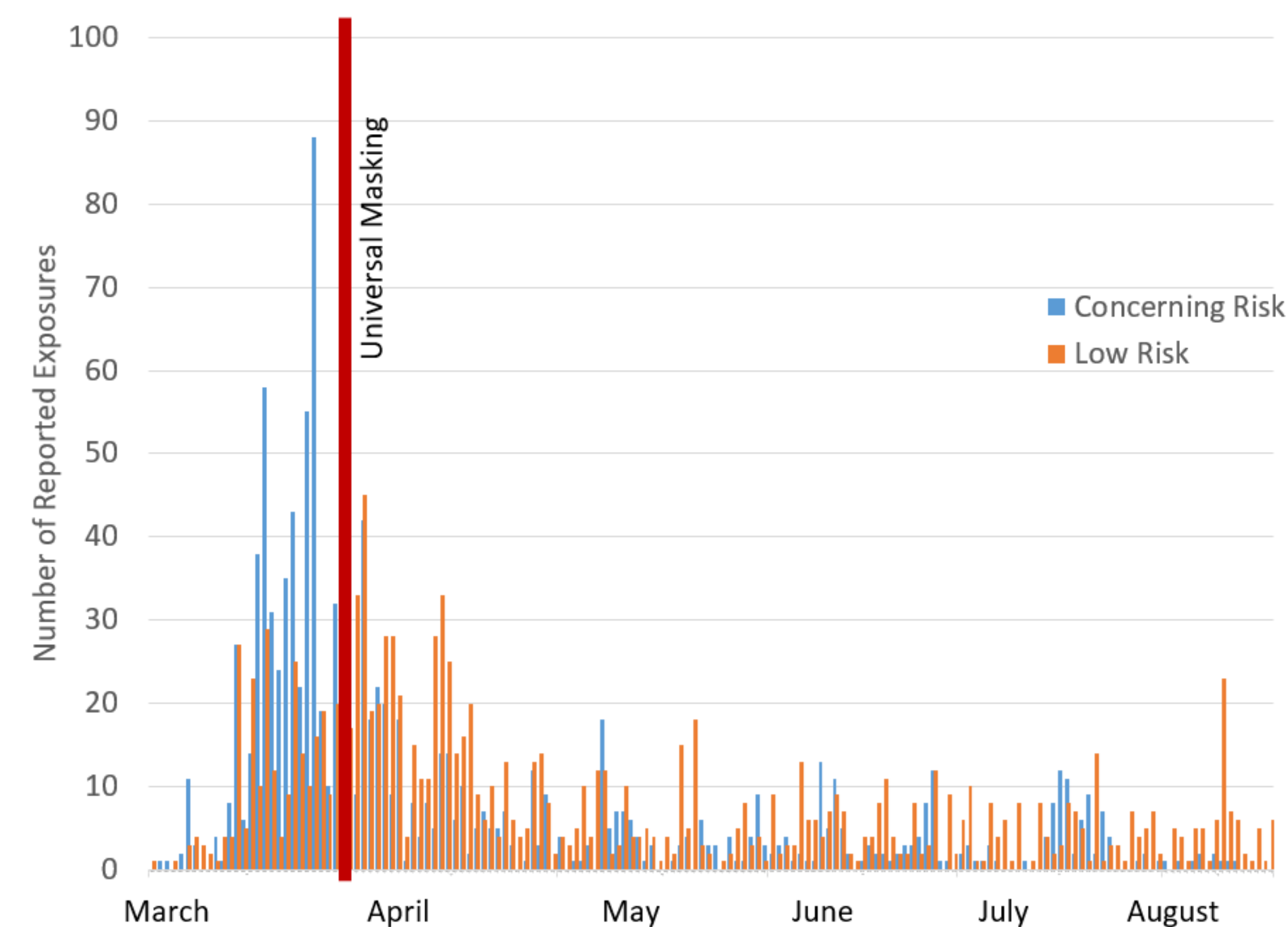


Fig 2. Reported Exposures by Risk Category Over Time

## CONCLUSIONS

- We describe the experience of a novel Contact Tracing Center, leveraging alternate staffing pools to track EPE resulting in one case of secondary transmission to a patient and caregiver.
- Measures to reduce exposures include; sick policy adherence, high hand hygiene compliance, standard precautions, universal masking, and robust contact tracing operations
- A strong data collection system is crucial to identify process gaps, review compliance themes and have prompt interventions to reduce concerning risk exposures.