

MEASLES SECRET SHOPPER

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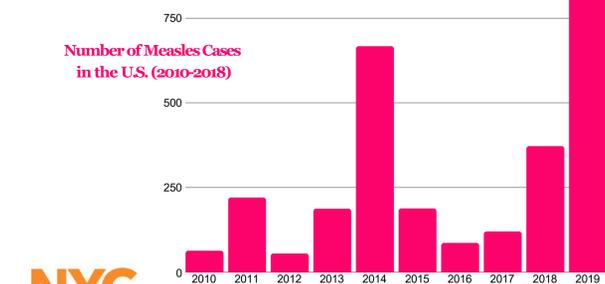
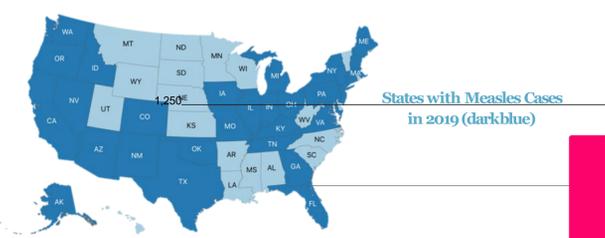


INTRODUCTION

This summer, we worked at **NYC Health and Hospitals's** (NYC H+H) Emergency Management office. Specifically, we worked in the System-wide Special Pathogens Program with Dr. Syra Madad. A large portion of our internship consisted of conducting measles secret shopper drills at all 11 acute care facilities to ensure NYC H+H's emergency departments are following measles protocols which involve screening questions, isolation and infection control procedures and communication protocols.

WHY?

According to the CDC, from January 1 to July 18, 2019, **1,148 individual cases of measles have been confirmed in 30 states** in the United States. "This is the greatest number of cases reported in the U.S. since 1992 and since measles was declared eliminated in 2000". New York was one of these states and considering how many outside travelers enter NYC, we thought it was important to verify NYC H+H's facilities are ready to combat this special pathogen that has resurfaced.



WHAT IS MEASLES?

Measles is a highly contagious respiratory disease caused by a virus that is spread by **direct contact** with nasal or throat secretions of infected people. Measles is **one of the most contagious viruses on earth**; one measles infected person can give the virus to 18 others. In fact, **90% of unvaccinated people exposed to the virus become infected**. You can catch measles just by being in a room where a person with measles has been, up to 2 hours after that person is gone. And you can catch measles from an infected person even before they have a measles rash.

METHODS

- Entered EDs with fake aliases
- Listed many obvious symptoms of measles
- Reported recent travel to a country with a measles outbreak
- Created a measles-like rash with paint

SCENARIO

- 21-year-old female has a fever that started 1-2 days ago of 102 °F and increased to 103°F that morning
- Took Tylenol just before coming to hospital
- Other symptoms include fatigue, loss of appetite, and apparent wet cough
- Visible rash on arm (and often face) appeared that morning
- Returned two days ago from volunteering at a hospital in Kiev, Ukraine

THREE OBJECTIVES

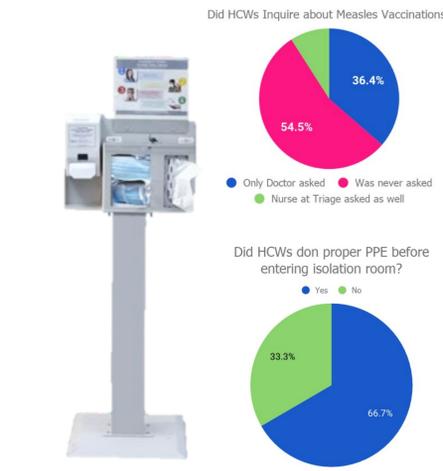
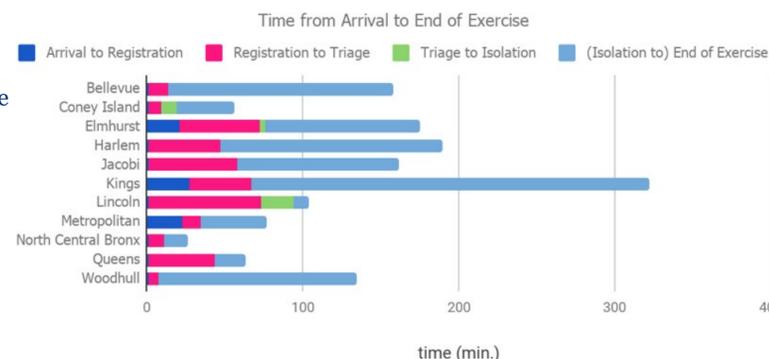
Objective I: Screening
Using Universal Travel Screening, the facility should be able to identify patients who have a positive history of either (a) traveling to/from an area with a Measles outbreak, (b) implementation of fever/rash/travel protocols, or (c) close contact with someone who is/was recently ill.

Objective II: Isolation & Infection Control

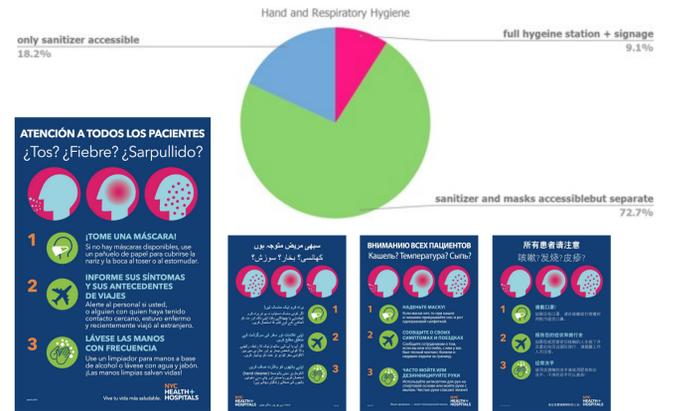
Facility providers (either a healthcare worker at triage or a physician) should be able to identify whether or not patients have been vaccinated for Measles. Patients with positive exposure/risk of Measles are (a) provided appropriate PPE, (b) isolated rapidly, and (c) treated with appropriate infection control precautions. Additionally, all healthcare workers that come in contact with the suspected measles patient should have appropriate PPE and take appropriate infection control precautions.

Objective III: Communication

Appropriate notification protocols to appropriate personnel (supervising nurse and infection control) and authorities (DOH) should be implemented in a timely manner.

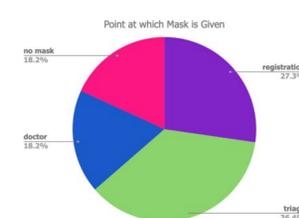


RESULTS



STRENGTHS

- 100%** of hospitals had strategically placed **signage/posterage** for universal travel with fever, cough, and rash
- 73%** applied **universal traveling screening**
- 82%** gave the patient a **mask** before the patient was escorted to the isolation room
- 66%** of providers donned **proper PPE** (N-95 & gloves) before entering the isolation room



A REAS FOR IMPROVEMENT

- 27%** did not apply **universal travel screening**
- Only 9%** asked about **recent close contact** with someone who was recently ill
- Only 55%** are using Measles posters in a **language other than English**
- 56%** did not suspect a measles patient from registration, and **only 27% of hospitals isolated the patient**
- 45%** of hospitals gave the patient a mask at triage or after triage
- 55%** of HCWs never asked about measles vaccination

CONCLUSION

Readdressing our three objectives, we **proposed recommendations for each objective** from the results we gathered. For example, for *Screening*, we proposed that HCWs at registration must ask patient about symptoms, recent travel, and close contact. For *Isolation and Infection Control*, we proposed that hygiene station with automatic hand sanitizer, masks, and signage at all points of entry and in waiting rooms. For *Communication*, we recommended that HCWs must inform appropriate authorities at the identification of a suspected measles patient.

Our research was extremely helpful to each of the 11 NYC H+H hospitals, and NYC H+H in general, because **it made evident which areas needed to be improved** in order to better serve patients, minimize measles spread and/or contamination and prep for the Department of Health's inspection in the coming weeks.

We are currently working on publishing our results as to better reduce the measles epidemic that is currently happening in NYC, across the US and around the world. **We hope our findings will improve hospitals' measles screening techniques and measles isolation and infection control protocols** around the globe.