

# Improving Compliance with Infection Control Practices: A Quality Improvement Project

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## Introduction & Background

- Hospital-acquired Infections (HAIs)**
- **1.7 million infections**, 99,000 deaths with \$28 to \$45 billion in healthcare cost each year.
  - Current prevention measures recommend hand hygiene & use of
  - Personal protective equipment (PPE).
- Why Emergency Department?**
- **Suboptimal** use of PPEs
  - **Hand hygiene compliance at 66%**

**Outcomes**  
The purpose of this quality improvement (QI) project is to assess ED staff knowledge, attitudes and behaviors towards hospital infection control guidelines and implement an educational intervention to promote staff compliance with hand hygiene and PPE use.

**Aim #1**  
To assess ED staff knowledge, attitudes and beliefs towards infection control guidelines over a 12-week period

**Aim #2**  
To increase compliance with the performance of hand hygiene and use of PPE over a 12-week period

## Methods

- Study design**  
Pre- & Post intervention study
- Setting**  
A 60-bed Adult medicine/trauma ED in an urban academic medical center.
- Intervention**
- **Modified Attitudes Regard Practice Questionnaire**
  - **Two one-hour virtual hand hygiene/infection control practices education sessions**
  - **Visual cues/Posters on unit**
  - **Pocket size handouts**
  - **Weekly observations-secret shoppers using audit tools**

### Sample

- **35 providers, 99 RNs and 31 PCTs** received the attitudes Survey and received education materials through email.
- **38 out of 44 Staff members** (Providers, nurses & PCTs) fully completed the pre-intervention survey (Table 1).

**Table 1: Demographics of Participants**

Variable	Entire cohort (N=44)
Age in years, median (SD)	38.3 (10.2)
Female, N (%)	33 (75%)
Male, N (%)	5 (11.4%)

## Measures

- **Pre- & Post education intervention survey**
- **Modified Attitudes Regarding Practice Questionnaire- 10-item questionnaire**
- **Hand hygiene and PPE use observations by secret shoppers** using IP360 portal

## Results

### Aim #1 Baseline Assessment

- **Accessibility** of HAIs information & preventative strategies – mean of **4.86**
- **Availability** of infection control protocols/guidelines –mean of **4.76**
- **70.5%** indicated barriers to compliance

**Table 2: Pre-intervention survey results**

Column1	N	Mini mum	Maxi mum	Mea n	Std. Deviation
Q1	38	1	7	2.32	1.947
Q2	38	1	7	4.39	1.685
Q3	38	2	7	4.74	1.605
Q4	37	1	7	5.03	1.675
Q5	37	3	7	6.32	0.944
Q6	37	3	7	6.22	0.886
Q7	37	2	7	5.73	1.239
Q8	37	2	7	4.86	1.686
Q9	37	5	7	6.11	0.774
Valid N (listwise)	37				

## Results

- Aim #2 Infection Control Compliance**
- **Observed compliance with hand hygiene - 90% & % 91% Nov. & Dec 2020** respectively .

**Table 3: Hand hygiene compliance**

Hand Hygiene Compliance by year month between 12/01/2020 and 12/31/2020

Year	Total Observations	Proper HH Percent	HH Compliance
2020	124	113	91%

Reason	Total Commonly missed opportunities reported by observers
No Hand Hygiene	7
No HH prior to donning PPE	2
Hands Full- No HH afterward	1
No HH after PPE removal	1

## Conclusion & Sustainability

- Discussion**
- Findings align with research using similar intervention
  - Hand hygiene compliance increased by **25%**
- Strength**  
Stakeholder support
- Limitations**
- **COVID-19 Pandemic**
- Recommendation to Site**
- ✓ Standardize tool for reporting barriers
  - ✓ Infection control Clinical ladder/buddy system
  - ✓ Quarterly Infection control re-education