INTRODUCTION

- Healthcare workers (HCW) and first responders (FR) have frequent occupational exposure to SARS-CoV-2 and thus could be at higher risk of contracting the virus [4].
- Differences in use of personal protective equipment (PPE) can lead to increased risk of infection of SARS-CoV-2 [3].
- Current research has shown that PPE, such as surgical masks or particulate respirators, is successful in protecting against SARS-CoV-2, although, more research is needed to study the variations of PPE usage [1].
- The study objective is to describe PPE use and incidence of COVID-19 infection in HCW and FR.

STUDY DEMOGRAPHICS

- Table 1: PPE Usage by Healthcare Professionals
- Table 2: PPE Usage by First Responders

METHODS

- Prospective cohort study of 473 HCW and FR.
- Participants completed computerized enrollment surveys, provided quarterly blood specimens, submitted weekly mid-turbinate nasal swabs, and responded to weekly surveys.
- For incidence rate calculations (per 1,000 person weeks) we excluded confirmed SARS-CoV-2 infection before entering the study, confirmed SARS-CoV-2 infection during study participation, and COVID-19 Vaccination (first dose).

RESULTS

- Among HCW, inpatient providers reported highest percentage of glove use (64.22%) compared to outpatient providers (46.81%) and MA's (46.34%), respectively.
- Majority of particulate respirators (N95's) were used by inpatient providers (52.45%) as compared to outpatient providers (31.91%) and MA's (26.83%).
- HCWS reported lower usage of cloth face masks at work (MA's=7.32%; outpatient providers=6.38%; inpatient providers=5%) than police officers (53.85%).
- Fire services (85%) used N95's more than the police officers (15.38%) and non-fire medical services (53.33%).
- Fire services had a higher percentage of gloves usage (90%) compared to police (46.15%), and paramedics (73.33%).

Conclusions

- Higher COVID-19 infection rates occurred in the in FR population compared to HCW.
- There may be a relationship between COVID-19 infection rates and intervention oxygen procedures performed.
- Variations in PPE use could also contribute to higher incidence of COVID-19 infection.
- Data from this study could be used to direct future policies on PPE usage within at-risk occupations.

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