



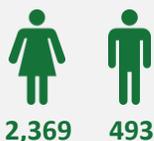
## Protection in preventing respiratory virus infection: Application of masks in response to COVID-19 Pandemic

**Medical masks (procedure/surgical) are as effective as N95 respirators in preventing respiratory virus infection in NON-AGMP procedures.**

### EVIDENCE

This cluster randomized clinical trial found that as worn by health care providers (HCP), **N95 respirators were no more effective than medical masks** as measured by the rate of laboratory-confirmed influenza events and laboratory confirmed respiratory illness events.

#### Population



HCP in settings with a high prevalence of acute respiratory illness.

2,369 493  
Mean age: **43** years

#### Viruses tested for

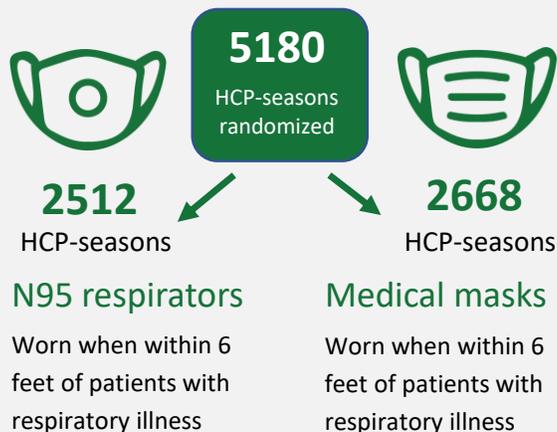
- Coxsackie/echoviruses
- Coronavirus HKU1
- Coronavirus NL63
- Coronavirus OC43
- Coronavirus 229E
- Human metapneumovirus
- Human rhinovirus
- Influenza A
- Influenza B
- Parainfluenza virus type 1
- Parainfluenza virus type 2
- Parainfluenza virus type 3
- Parainfluenza virus type 4a
- Parainfluenza virus type 4b
- Respiratory syncytial virus type A
- Respiratory syncytial virus type B

#### Locations

**137** Outpatient settings in 7 US medical centres



#### Intervention



#### Primary outcome



Incidence of laboratory - confirmed influenza over 4 years during peak viral respiratory illness season (5180 total HCP-seasons analyzed).

#### Secondary outcome



Incidence of laboratory confirmed respiratory illness.

#### Findings

Incidence of laboratory-confirmed influenza events:



**N95 respirators**  
207 influenza infection events in 2512 HCP-seasons

**8.2%**



**Medical masks**  
193 influenza infection events in 2668 HCP-seasons

**7.2%**

**Difference in influenza rates was not significant:**

**1.0%** (95% CI, -0.5% to 2.5%)

**Laboratory confirmed respiratory illnesses:**

**N95 respirators**  
371/2512  
**14.7%**

**Medical masks**  
417/2668  
**15.6%**

**Absolute difference: 0.9%**

**Incident rate ratio: 0.96**  
(95% CI -28.2 to 10.9)

1. Radonovich Jr LJ, Simberkoff MS, Bessesen MT; the ResPECT Investigators. N95 respirators vs medical masks for preventing influenza among health care personnel: a randomized clinical trial [published September 3, 2019]. *JAMA*. doi: 10.1001/jama.2019.11645

