



National Institute of Environmental Health Sciences  
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# Protection of Health Care and other Essential Workers During COVID19 Response

**Chip Hughes, Director**

**Worker Training Program**

**National Institute of Environmental Health Sciences**



## NIEHS WTP: Exposure prevention for COVID19 essential workers

- Introduction by Chip Hughes, Director, NIEHS Worker Training Program (WTP)
- Presenters (10 minutes for each speaker):
  - Lisa Brosseau, Sc.D., (retired professor, University of Illinois at Chicago)
    - Topic: science and evidence on transmission of short-range aerosols SARS CoV-2
  - Shawn Gibbs, Ph.D., Indiana University Bloomington
    - Topic: Pandemic Extended Use and Reuse of N95 Filtering Facepiece Respirators
  - Amber Mitchell, D.Ph., International Safety Center / NIEHS WTP
    - Topic: Review of the importance of preventing occupational mucocutaneous exposures including PPE and eye protection
  - Robert Harrison, M.D., University of California, San Francisco
    - Topic: Summary of Issues

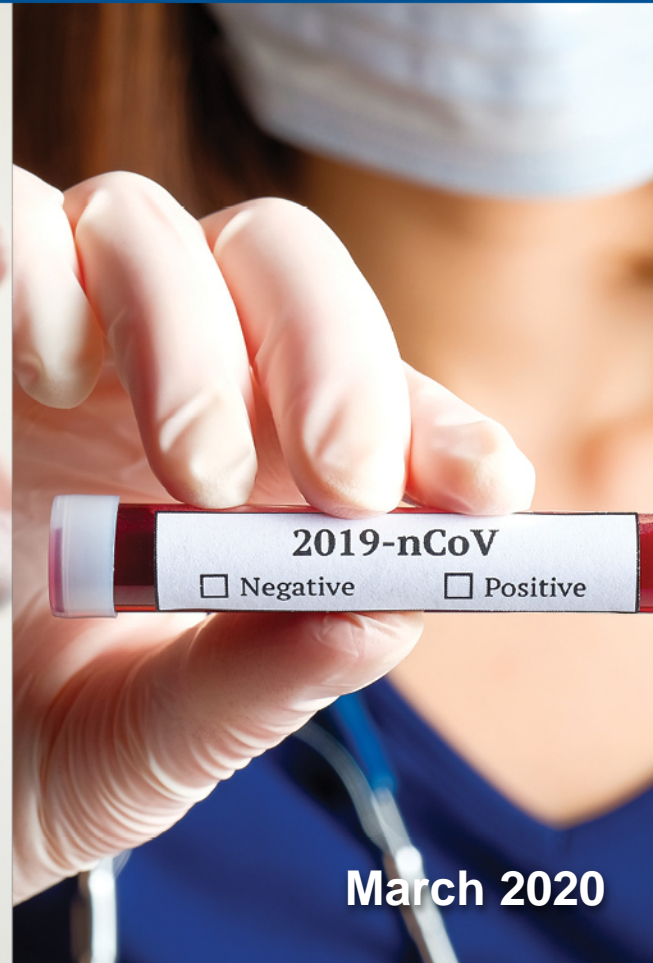


National Institute of  
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# NIEHS COVID-19 Response Training Tool

## Protecting Yourself from COVID-19 in the Workplace

*Safety and Health Awareness for Responders to the Coronavirus*



March 2020

# NIH/NIEHS WTP

## COVID-19 Virtual Safety Training Initiative

**Goal: To increase health and safety awareness for responders and workers who face potential exposure to COVID-19**

### Training Initiative Objectives:

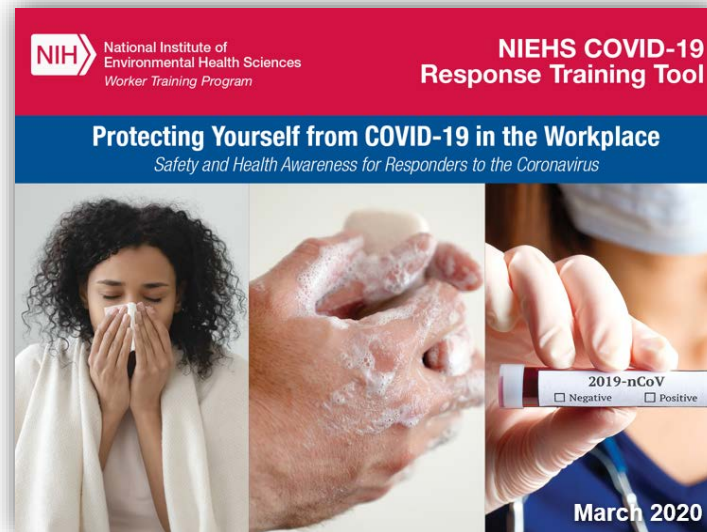
**Identify key evidence-based methods to prevent and respond to COVID-19 in workplaces** providing essential services

**Create a virtual training platform** for frontline healthcare, responders, law enforcement, environmental and critical service workers

**Build a cadre of virtual safety trainers/ advisors to deliver remote training** via advanced training technology to frontline workers

# COVID-19 Training Tool

- Increase health and safety awareness for frontline workers
- Objectives:
  - Provide **basic facts** about COVID-19 (transmission, symptoms)
  - **Assess risk** of workplace exposure
  - Define key steps in **worker protection** and **infection control**
  - Identify **methods to prevent and respond** to COVID-19 in the workplace



Developed in collaboration with federal partners and Jonathan Rosen, industrial hygienist with the National Clearinghouse for Worker Safety and Health Training

Published on **March 23** with NIEHS press release, **“COVID-19 Workers Get Training to Protect Their Own Health”**

## How many health care workers are at risk of being sacrificed to COVID-19 in the US?



- Frogner BK. How many health care workers are at risk of being sacrificed to COVID-19 in the US?[Internet Blog] Center for Health Workforce Studies, University of Washington, Mar 31 2020.  
<http://depts.washington.edu/fammed/chws/how-many-health-care-workers-are-at-risk-of-being-sacrificed-to-covid-19-in-the-us/>

# Total Health Care Workforce by Job Task and Profession (2018)

Table 1: Count of Selected Health Care Settings and Occupations, 2018

Health Care Setting (col) Health Care Occupation (row)	General Medical & Surgical Hospitals	Outpatient Care Centers	Offices of Physicians	Skilled Nursing Facilities	Home Health Care Services	Continuing Care Retirement Communitie & Assisted Living Facilities	Row Total
Physicians	171,260	27,410	377,430	530	1,470	40	578,140
Respiratory Therapists	98,960	1,260	2,890	6,070	2,390	-	111,570
Physician Assistants	28,050	8,910	64,540	110	80	-	101,690
Medical Assistants	97,600	57,240	389,160	-	-	13,050	557,050
Nurse Practitioners	44,160	17,270	84,720	1,180	4,700	-	152,030
Registered Nurses	1,698,700	141,830	197,790	153,120	181,180	34,640	2,407,260
Licensed Practical & Vocational Nurses	89,760	27,240	90,830	210,850	89,530	51,370	559,580
Nursing Assistants	372,320	13,940	21,080	581,140	80,150	163,950	1,232,580
Home Health Aides	8,300	1,580	2,970	19,930	440,550	68,870	542,200
Personal Care Aides	-	-	-	-	348,000	172,720	520,720
Emergency Medical Technicians & Paramedics	-	-	-	-	-	-	257,210
Pharmacists	-	-	-	-	-	-	262,410
Column Total	2,609,110	296,680	1,231,410	972,930	1,148,050	504,640	6,762,820
Total (All Occupations)	5,546,980	922,090	2,590,770	1,610,650	1,449,540	930,050	13,050,080

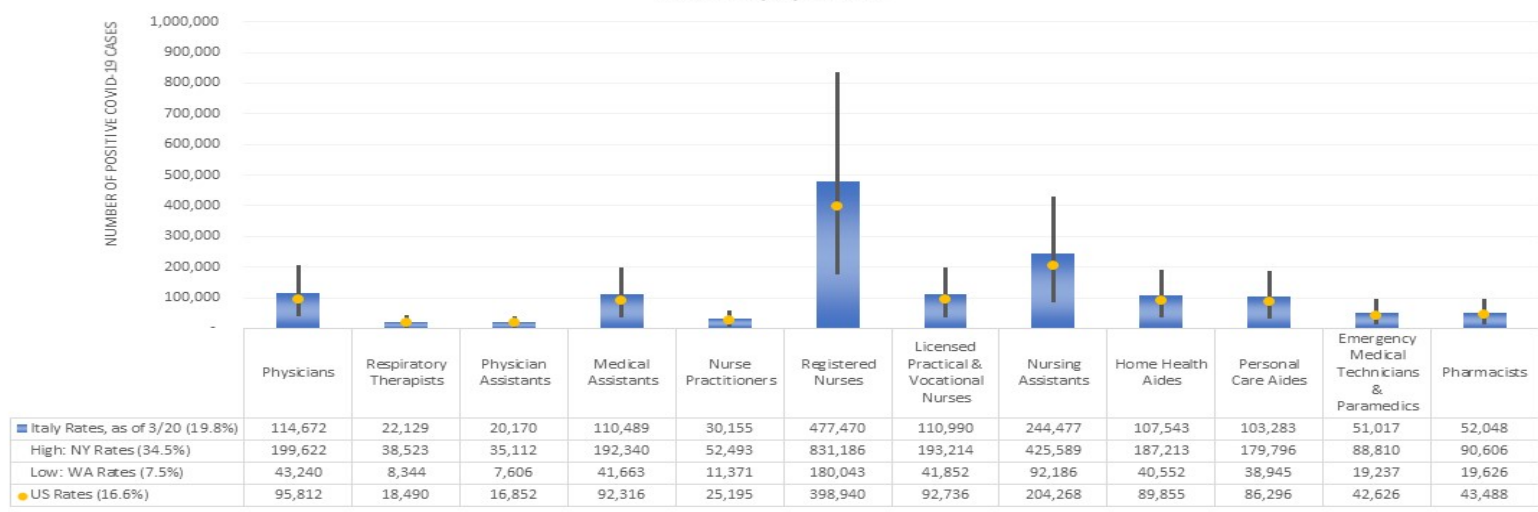
- Indicates either no data or too few to be reported

Source: Bureau of Labor Statistics, Occupational Employment Statistics, May 2018. <https://www.bls.gov/oes/current/oesrci.htm>

<https://depts.washington.edu/fammed/chws/how-many-health-care-workers-are-at-risk-of-being-sacrificed-to-covid-19-in-the-us/>

# Total COVID19 Cases by Health Care Occupation and by Scenario Models

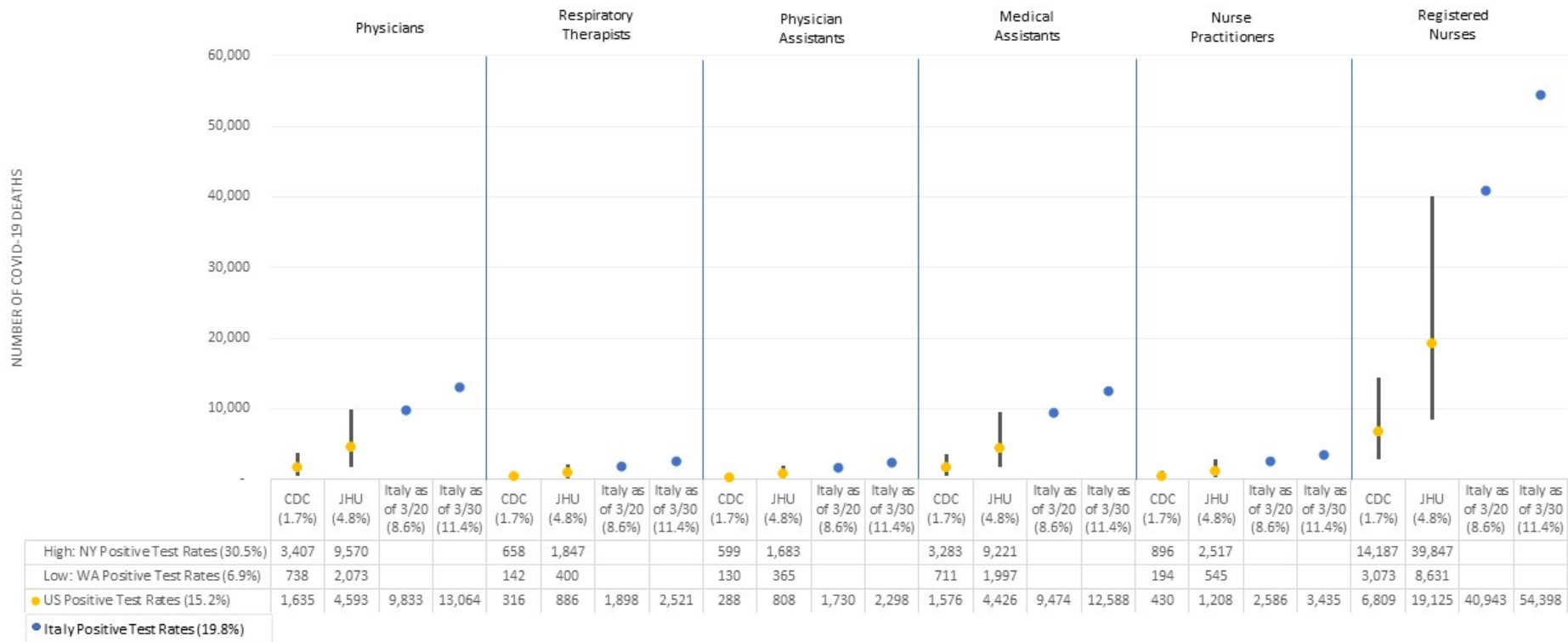
Figure 3: Number of Positive COVID-19 Cases by Health Care Occupation Under Different Scenarios Based on 3/30/20 Rates



Sources: Occupational Employment Statistics [Data]. Bureau of Labor Statistics 2018 [cited 2020 Mar 23]; Available from <https://www.bls.gov/oes/current/oesrci.htm>; The COVID Tracking Project [Data]. 2020 [cited 2020 Mar 30]; Available from: <https://covidtracking.com/>; Italy [Data]. Our World in Data 2020 [cited 2020 Mar 30]; Available from: <https://ourworldindata.org/covid-testing>

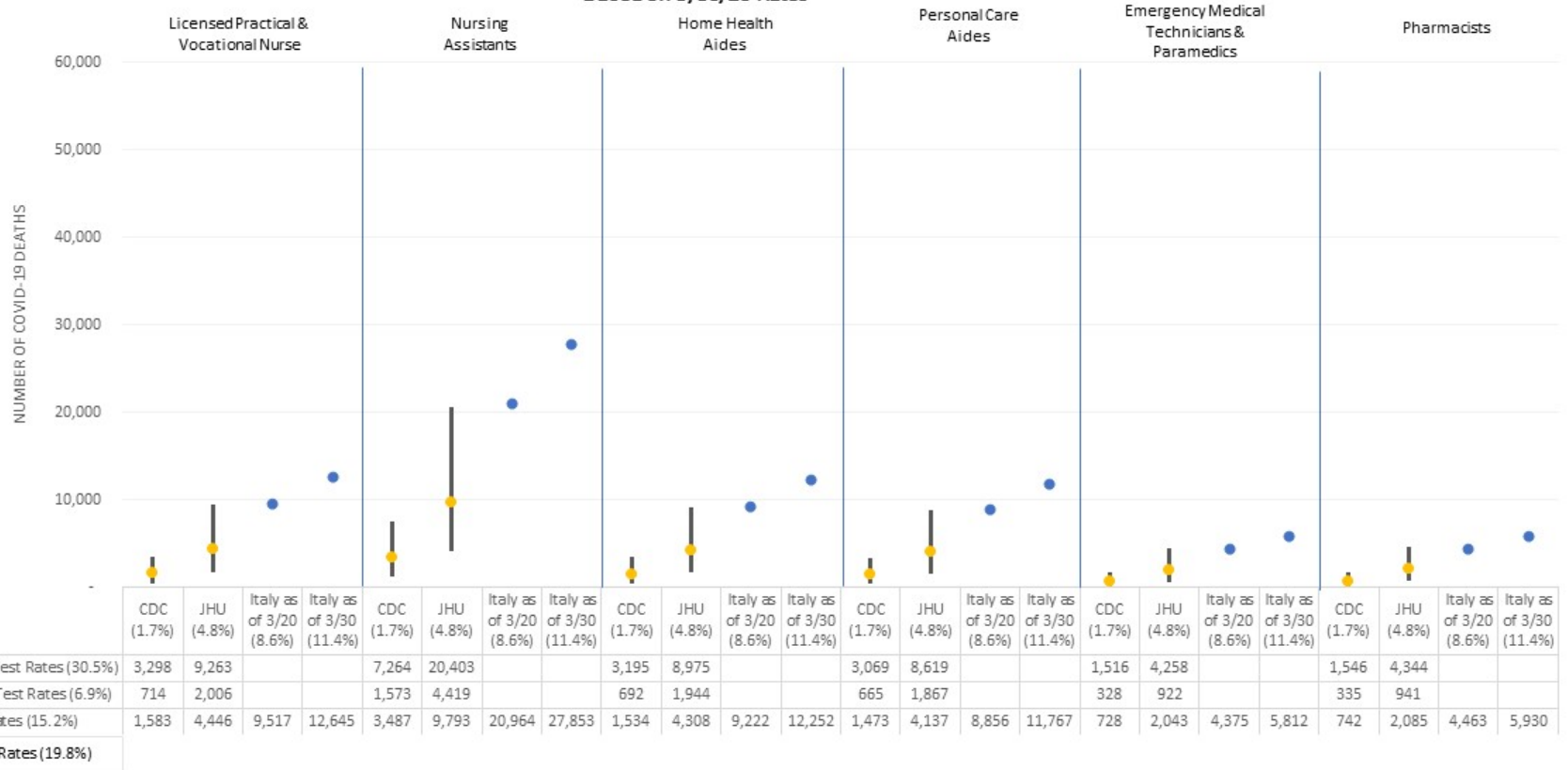


Figure 4a: Number of COVID-19 Deaths by Health Care Occupation Under Different Scenarios  
Based on 3/30/20 Rates



Source: Occupational Employment Statistics [Data]. Bureau of Labor Statistics 2018 [cited 2020 Mar 23]; Available from: <https://www.bls.gov/oes/current/oessrci.htm>; Coronavirus Disease 2019 (COVID-19): Cases in US [Data]. Centers for Disease Control and Prevention 2020 [cited 2020 Mar 30]; Available from: <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>; Coronavirus Resource Center [Data]. Johns Hopkins University & Medicine 2020 [cited 2020 Mar 30]; Available from: <https://coronavirus.jhu.edu/>; Coronavirus Testing: Criteria and Number by Country [Data]. Worldometer 2020 [cited 2020 Mar 30]; Available from: <https://www.worldometers.info/coronavirus/covid-19-testing/>

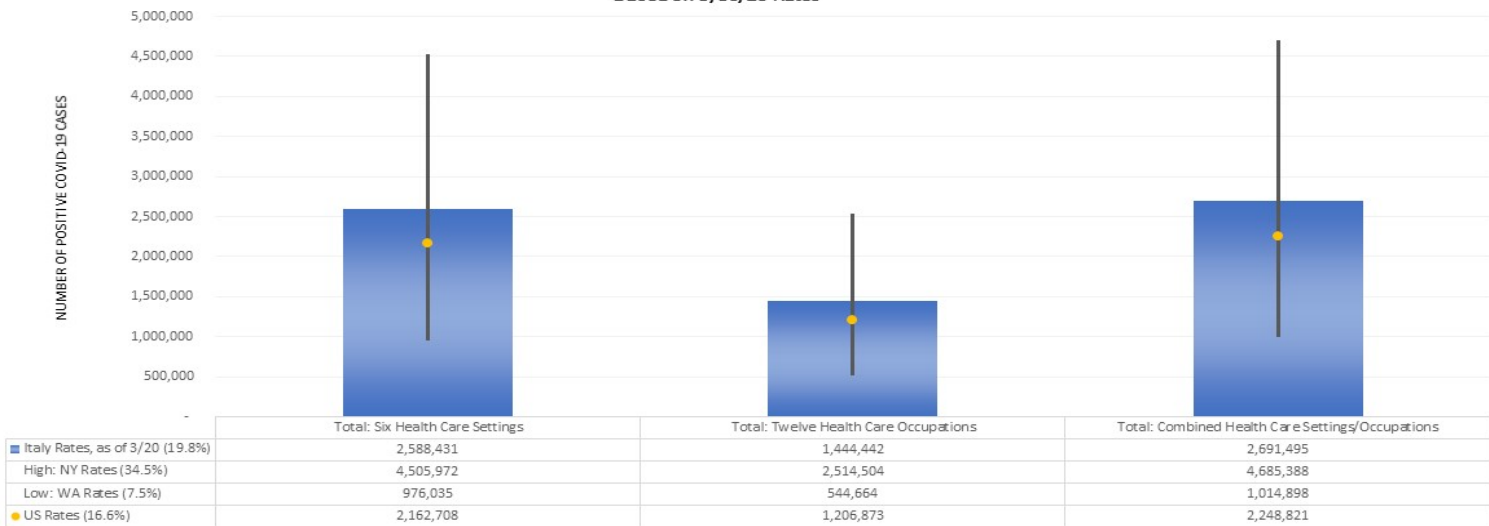
Figure 4b: Number of COVID-19 Deaths by Health Care Occupation Under Different Scenarios  
Based on 3/30/20 Rates



Source: Occupational Employment Statistics [Data]. Bureau of Labor Statistics 2018 [cited 2020 Mar 23]; Available from: <https://www.bls.gov/oes/current/oesosci.htm>; Coronavirus Disease 2019 (COVID-19): Cases in US [Data]. Centers for Disease Control and Prevention 2020 [cited 2020 Mar 30]; Available from: <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>; Coronavirus Resource Center [Data]. Johns Hopkins University & Medicine 2020 [cited 2020 Mar 30]; Available from: <https://coronavirus.jhu.edu/>; Coronavirus Testing: Criteria and Number by Country [Data]. Worldometer 2020 [cited 2020 Mar 30]; Available from: <https://www.worldometers.info/coronavirus/covid-19-testing/>

# COVID19 Cases by occupation and Setting

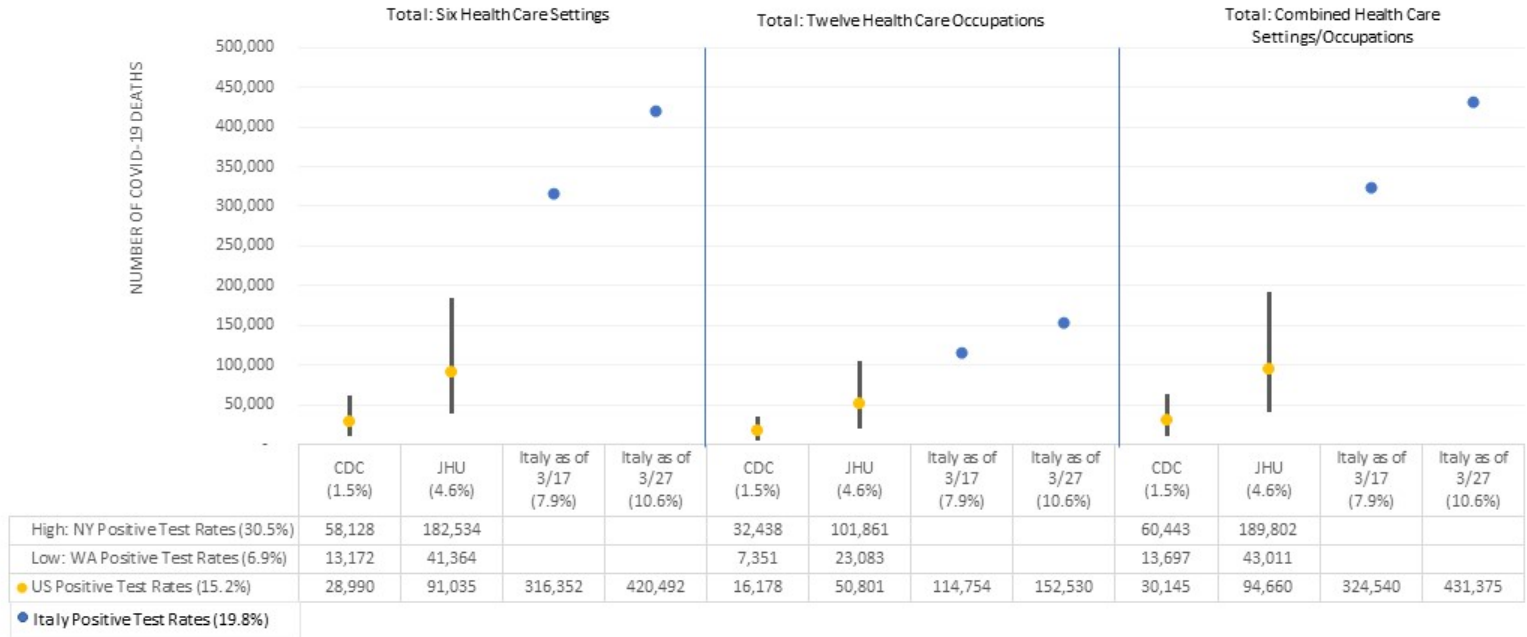
Figure 5: Combined Number of Positive COVID-19 Cases by Health Care Setting/Occupations Under Different Scenarios Based on 3/30/20 Rates



Sources: Occupational Employment Statistics [Data]. Bureau of Labor Statistics 2018 [cited 2020 Mar 23]; Available from <https://www.bls.gov/oes/current/oesrci.htm>; The COVID Tracking Project [Data]. 2020 [cited 2020 Mar 30]; Available from: <https://covidtracking.com/>; Italy [Data]. Our World in Data 2020 [cited 2020 Mar 30]; Available from: <https://ourworldindata.org/covid-testing>



Figure 6: Combined Number of COVID-19 Deaths by Health Care Occupation/Setting Under Different Scenarios Based on 3/30/20 Rates



Source: Occupational Employment Statistics [Data]. Bureau of Labor Statistics 2018 [cited 2020 Mar 23]; Available from: <https://www.bls.gov/oes/current/oesrci.htm>; Coronavirus Disease 2019 (COVID-19): Cases in US [Data]. Centers for Disease Control and Prevention 2020 [cited 2020 Mar 25]; Available from: <https://www.cdc.gov/coronavirus/2019-ncov/case-updates/cases-in-us.html>; Coronavirus Resource Center [Data]. Johns Hopkins University & Medicine 2020 [cited 2020 Mar 25]; Available from: <https://coronavirus.jhu.edu/>; Coronavirus Testing: Criteria and Number by Country [Data]. Worldometer 2020 [cited 2020 Mar 25]; Available from: <https://www.worldometers.info/coronavirus/covid-19-testing/>



# Thank You for Listening!

## Any Questions?