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Safety Science 138 (2021) 105193

Perspectives of region II OSHA authorized safety and health trainers about initial COVID-19 response programs

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A R T I C L E   I N F O

Keywords:
COVID-19
Respiratory protection programs
Risk aversion
Occupational health programs
Worksite safety

A B S T R A C T

In this cross-sectional survey-based study conducted in early fall 2020, we attempted to measure and ascertain the extent of whether employers in New York and New Jersey were prepared to manage and follow occupational safety and health (S&H) regulations and industry risk processes in developing an exposure control response program to COVID-19, the disease caused by exposure to the coronavirus SARS-CoV-2. We focused on Region II of the U.S. Department of Labor (USDOL)-Occupational Safety and Health Administration (OSHA). In addition, we examined possible explanations for lack of compliance and uniformity across the region in various USDOL-OSHA regulatory aspects like training, respiratory protection program administration and proper task-specific application of occupational S&H hazard controls through risk management systems. We suggest opportunities for employer and governmental interventions to reduce potential worker exposures and better control future worksite biological hazards and infectious disease transmission. Overall, data suggested prevalent inconsistencies, noncompliance and a less than uniform approach to implementing COVID-19 response programs.

1. Introduction

The SARS-CoV-2 virus led to the worldwide outbreaks of the coronavirus disease or COVID-19 in 2020, causing major disruptions throughout the world (Whitehouse 2020). The national emergency declared on March 13, 2020 initiated emergency shutdown of schools, public gatherings, and businesses. As a result, a series of local and state-based shelter-in-place and stay-at-home responses were initiated to facilitate workers performing their duties away from their businesses (Bertrand et al., 2020; Economic Policy Institute, 2020). From the onset of the COVID-19 pandemic, some industries were deemed essential. These essential workplaces included healthcare (including allied health and social services), food and agriculture, emergency services, public transportation, construction, energy, and critical manufacturing (Williams et al. 2020). Protecting essential workers is important. The subset of essential workers who must report to their jobs and are most vulnerable to respiratory health risks are the “frontline” workers.

During late February and early March of 2020, based on expert intuition (Harteis et al., 2013) during interactive discussions in coursework presented through the Rutgers School of Public Health (RSPH), Occupational Training Institute Education Center (OTIEC), compliance gaps emerged on how employers approached workplace COVID-19 responses. Feedback from employees and managers alike provided an impression, i.e., Region II employers were using a more ad hoc and generic public health means to safeguarding workers rather than following regulatory occupational safety and health (S&H) standards and recognized systematized processes for the worksite.

From interactions and classroom discussions, we surmised a majority of these qualified persons attending RSPH trainings work for larger organizations, such as large companies, unions and government entities. Many respondents also work as consultants with similar higher-tiered employers in the Region II and provide risk control and S&H training services.

We conducted this study to determine how employers were applying hazard controls in the workplace and assess if there was an informational and technical difference between practice and adherence to regulatory standards during the COVID-19 pandemic.

2. Methods

The RSPH research team sampled a pool of USDOL-OSHA-OTIEC authorized outreach trainers attending trainings over the last five

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https://doi.org/10.1016/j.ssci.2021.105193

Received 6 January 2021; Accepted 28 January 2021

Available online 4 February 2021

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years (2015–2020), whom OSHA considers qualified persons, possessing knowledge of occupational S&H standards applicable to their respective industry (USDOL-OSHA, 2020a). Additionally, they have demonstrated at least five years of workplace experience performing S&H oversight, or possess three years of the same experience with a college degree in occupational S&H, and a Certified Safety Professional (CSP) or Certified Industrial Hygienist (CIH) designation. These qualified persons work closely and often manage oversight of their respective occupational S&H for organizations in Region II.

The RSPH research team composed 14 questions (survey) based upon the category of authorized trainer certification (general industry, construction, or both) regulatory occupational S&H standards and universal components of injury and illness prevention program models. Survey questions probed qualified persons to ascertain if respective employers across Region II were indeed following a programed systematic approach to COVID-19 response or working outside of what would be appropriate and merely repurposing mass media-distributed publications and public health guidelines for occupational programs. OSHA authorized trainers, queried as qualified person respondents, gave the RSPH research team a high level of confidence in gauging the compliance of associated employers who they work and regularly interact.

These associated employers range widely across-general industry and construction including health care workers and many occupations deemed essential at the beginning of the pandemic.

Data collection and assimilation occurred within the framework of the Rutgers University Internal Review Board expedited approval (IRB Pro#2020001513, “COVID-19: Understanding Employer’s Actions Dedicated to Reducing Worker Exposure”). Data collected were analyzed using Microsoft Excel 2016 and IBM SPSS Statistics 25, respectively, for descriptive statistics, overall and by authorized trainer type, and cross-tab analyses of specific pairs of questions within the 14 question survey to examine details of employer practices.

Between June 1, 2015 and May 30, 2020, 1518 trainers conducted construction and general industry Outreach training; 197 (13%) were female and 1321 (87%) male. These trainers in the targeted study population were divided into six categories based on their self-identified employment history and presented in Table 1. Of the 1,518 trainers, 156 (10.3%) offer training in Spanish, three (3) in Chinese, one (1) in Greek, and one (1) in Polish. Of the 1281 (84.4%) respondents who identified their work setting, the majority 829 (64.7%) were risk consultants. Table 2 provides further breakdown of trainers in the targeted study population by their gender and work discipline.

### 3. Results

The initial target population for the present study was 1518 USDOL-OSHA trainers authorized between 2015 and 2020 in Region II across authorized trainer types (general industry (GI), construction, or both), reported participant gender identity and employment history or job categories (see Tables 1 and 2). After individuals were excluded because emails were undeliverable (e.g., retirements, job change out of Region II, etc.), the revised final target population was 1441. There were 374 participants to the survey conducted between July 16 and August 20 in the summer of 2020; however, we excluded 39 records as either duplicates (22, identified only by IP address and identical responses) or incomplete answer records (17). Thus, the final study sample from the final target population was 335, for an overall response or participation rate of 23.25%. By authorized trainer type, the sub-sample participation rates were as follows: 38 of 151 GI (25.2%), 219 of 1132 construction (19.4%), and 78 of 235 (33.2%) GI and construction.

Table 3 and Table 4 summarize the individual survey questions (Q) for the overall study sample. The answer options were yes, no, and “I do not know” and “not applicable” combined (DNK/NA). Some (Q1-4 and Q14 on authorized trainer type) were answered by everyone (n = 335), but, the rest (Q5-13) had 7–17 participants (2–5%) not answer. We considered these missing data; we adjusted denominators calculations. Table 3 highlights Q3-5 and Q7-13 with answer options yes, no and DNK/NA. Some items, Q3-Q5 and Q10, were on the employer COVID-19 response program. More specifically, these items pertained to the usefulness and practicality of it; employee knowledge and understanding of it; a formal training component for it; and, monitoring for compliance with it by the host or controlling employer in a multiple-employer workplace, respectively. Other items, Q7-9 and Q11-13, were specific to the employer respiratory protection program (associated with the COVID-19 response program). The details examined by these items pertained to: its presence before and after the World Health Organization (WHO) declared COVID-19 a global pandemic; its formal recognition of exposure to the SARS-CoV-2 virus (COVID-19) as a work-related hazard; its delineation of various types of and details about face coverings and respiratory personal protective equipment or PPE; and, its overall effectiveness, respectively.

For each question among Q3-4 and Q10-11 on the overall COVID-19 response program, the clear majority of study participants said “yes” (range 61.4–88.1%); however, many remaining participants said “DNK/NA” (range 4.5–28.4%). Interestingly, for other questions more specific to respiratory protection program components, only about half of study participants (range 47.1–55.2%) said “yes”; the range who said “DNK/NA” was similar (6.1–25.0%). For Q13 on overall safety and health program effectiveness—including but not necessarily limited to COVID-19 Response and Respiratory Protection Programs—45% said “yes” while 55% said “no.”

Table 4 highlights Q1-2 and Q6 with more specific answer options than yes or no, and DNK/NA. These were on the employer COVID-19 response program, specifically the primary sources of information used for it; the type or nature of it; and, the monitoring of it, respectively.

Overall, the majority of study participants reported the employer’s COVID-19 Response Program’s materials came from external sources, e.g., federal agencies and state agencies, and provided an active, formal means to monitoring program compliance. However, study participants were divided—and 5% said DNK/NA—among those who described their employer’s COVID-19 Response Program as being specific to job titles and tasks versus being more general in nature.

Table 5 and Table 6 present the same data as Table 3 and Table 4, respectively, but stratify the study sample by authorized trainer type (GI, construction, both GI and construction).

Table 5 illustrates similar results by authorized trainer type compared to the overall study sample, with some variability. In particular, for Q11, while the majority of respondents said the employer’s COVID-19 Response Program considered exposure to the SARS-CoV-2 virus a work-related hazard, the relative percentage was higher among the trainers with dual certification (GI and construction, ~70%) compared to GI or construction, which were similar (~60%). Furthermore, for Q13 on overall safety and health program effectiveness—including but not necessarily limited to COVID-19 Response and
Table 2
Summary of Gender and Employment History of Trainers.

| Employer                | Female Both | Construction | General Industry | Male Both | Construction | General Industry | Sub Total | Grand Total |
|-------------------------|-------------|--------------|------------------|-----------|--------------|------------------|-----------|-------------|
| Employer Association    | 3           | 6            | 1                | 10        | 8            | 28               | 5         | 41          |
| OSHA                    | 1           | 3            | 4                | 4         | 5            | 6                | 11        | 15          |
| NJDOL                   |             | 2            |                  | 2         |              |                  |           |             |
| Risk Consultant         | 23          | 67           | 92               | 92        | 109          | 603              | 25        | 737         |
| Safety Professional     | 8           | 6            | 17               | 31        | 17           | 52               | 49        | 118         |
| Trainer                 | 5           | 11           | 6                | 22        | 37           | 105              | 19        | 161         |
| Union Trainer           | 2           | 1            | 2                | 3         | 2            | 45               | 2         | 49          |
| No Response             | 1           | 27           | 7                | 35        | 14           | 175              | 13        | 202         |
| Grand Total             | 41          | 118          | 38               | 197       | 194          | 1014             | 113       | 1321        |

Table 3
Survey of authorized trainers on respiratory protection programs, USDOL-OSHA Region II, 2020 COVID-19 pandemic. Note: “N/A, DNK” = participants did not know and/or did not want to answer question (thus not counted as missing data).

| Type of OSHA authorized trainer | Overall Study Sample |
|---------------------------------|----------------------|
|                                 | N (missing) | Yes | %   | No | %   | N/A, DNK | %   |
| Q3_In your opinion, do you think your employer’s COVID-19 Response Program is useful / will be useful and practical, or, is less than practical? | 335 (0) | 295 | 88.1 | 25 | 7.5 | 15 | 4.5 |
| Q4.Does your employer’s COVID-19 Response Program assess if employees know and understand the program? | 335 (0) | 237 | 70.7 | 62 | 18.5 | 36 | 10.7 |
| Q5.Does your employer’s COVID-19 Response Program have a corresponding formal training component? For example, a demonstration and validation exercise so an employee knows how to wear and maintain a respirator or a mask? | 328 (7) | 171 | 52.1 | 137 | 41.8 | 20 | 6.1 |
| Q7* _Before_ WHO declared COVID-19 a global pandemic (March 11, 2020) did your employer have in place a full respiratory program? | 325 (10) | 153 | 47.1 | 138 | 42.5 | 34 | 10.5 |
| Q8* _After_ WHO declared COVID-19 a global pandemic (March 11, 2020) did your employer have in place a full respiratory program? | 324 (11) | 159 | 49.1 | 122 | 37.7 | 43 | 13.3 |
| Q9.To the best of your knowledge and observation, are employees who wear respirators at your workplaces trained and medically cleared to do so? | 324 (11) | 179 | 55.2 | 64 | 19.8 | 81 | 25.0 |
| Q10_In multiple-employer workplaces, where another employer’s workers can expose you or other members of your company, does the host employer or controlling employer have a means of monitoring compliance with the COVID-19 Response Program? | 324 (11) | 199 | 61.4 | 33 | 10.2 | 92 | 28.4 |
| Q11_Did your employer’s COVID-19 response program consider COVID-19 a workplace-related hazard? | 322 (13) | 202 | 62.7 | 79 | 24.5 | 41 | 12.7 |
| Q12_Does your employer have a training protocol to clearly delineate differences between cloth face coverings, surgical masks, filtering facepieces and respirators? | 318 (17) | 168 | 52.8 | 118 | 37.1 | 32 | 10.1 |
| Q13_In your opinion, based upon your experience in your industry and your working knowledge of safety and health regulatory standards, do you believe most employers have effective safety and health programs? | 318 (17) | 143 | 45.0 | 175 | 55.0 | 0 | 0.0 |

Respiratory Protection Programs—nearly 3-in-4 trainers with dual certification said “no” whereas the response was evenly split 50–50 among Construction trainers and a simple majority of the GI trainers said “yes” (51.4%; 48.6% “no”). It can also be noted how while results for Q12 about various face coverings and PPE were similar (simple majority – 50 among workers like healthcare, food, etc. It can also be noted how while results for Q12 about various face coverings and PPE were similar (simple majority – 50 among the overall study sample and by authorized trainer type, more of the GI trainers, about 3-in-5, said “yes.” GI does include essential workers like healthcare, food, etc.

Table 6 confirmed how in this study a majority of employers used external information sources. However, GI trainers reported working for employers with a more general/generic guideline type of COVID-19 Response Program with passive self-regulation compared to construction and dual authorized trainers, who reported active, more formal monitoring.

Fig. 1 presents results from cross-tabs analyses for overall study sample of authorized trainers. We examined how often participants gave the same answer (yes/yes, no/no, DNK/DNK) to pairs of questions on similar topics; ideally, participants would have said “yes” to both. The figure’s three sections are: (a) Items on COVID-19 Response Program, Q2-3 and Q3-4; (b) Items on SARS-CoV-2, the virus which causes COVID-19, as a formally recognized biological workplace hazard, Q7-8 plus Q8 and Q11; and, (c) Items on details of the Respiratory Protection Program during the employer’s COVID-19 pandemic response, Q5 and Q9 plus Q9 and Q12.

Fig. 2 presents similar results from cross-tabs analyses with comparisons among the three types of authorized trainers. We examined how often participants within each sub-group (GI, construction, both GI and construction) gave the same answer (yes/yes, no/no, DNK/DNK) to pairs of questions on similar topics; ideally, participants would have said “yes” to both. The figure’s three sections again are: (a) Items on COVID-19 Response Program, Q2-3 and Q3-4; (b) Items on SARS-CoV-2, the virus which causes COVID-19, as a formally recognized biological workplace hazard, Q7-8 plus Q8 and Q11; and, (c) Items on details of the Respiratory Protection Program during the employer’s COVID-19 pandemic response, Q5 and Q9 plus Q9 and Q12.
Table 4

USDOL-OSHA authorized trainers on details of respiratory protection programs, Region II, 2020 COVID-19 pandemic. Note: “N/A, DNK” = participants did not know and/or did not want to answer question (thus not counted as missing data).

| Type of OSHA authorized trainer | Overall Study Sample |
|---------------------------------|----------------------|
|                                 | N (missing) | Internal development | % | Externally derived | % | N/A, DNK | % |
| Q1. What was the primary source of information/materials for your employer’s COVID-19 Response Program? | 335 (0) | 92 | 27.5 | 219 | 65.4 | 24 | 7.2 |

| Type of OSHA authorized trainer | Overall Study Sample |
|---------------------------------|----------------------|
|                                 | N (missing) | Specific | % | General | % | N/A, DNK | % |
| Q2. Did your employer's initial COVID-19 Response Program address specific tasks for specific employees perform or was your COVID-19 Response Program more a general/generic guideline-type of program? | 335 (0) | 165 | 49.3 | 153 | 45.7 | 17 | 5.1 |

| Type of OSHA authorized trainer | Overall Study Sample |
|---------------------------------|----------------------|
|                                 | N (missing) | Active, Formal | % | Passive, Self-regulate | % | N/A, DNK | % |
| Q6. To ensure employees follow your employer's COVID-19 Response Program: Does your employer provide an active/more formal means of monitoring the program, or is it a more passive/self-regulated program? | 328 (7) | 179 | 54.6 | 129 | 39.3 | 20 | 6.1 |

The present study documents relevant data concerning the development and implementation of COVID-19 response programs at the initial onset of the pandemic. These data come from the informed opinions of experienced OSHA authorized trainers, who typically work with employers who already had awareness of and a culture and safety management systems (Aburumman et al., 2019).

Overall, the data from this cross-sectional survey-based study in late summer-early fall 2020, in between the first and second wave of the COVID-19 pandemic in Region II specifically New York City metropolitan area of New York State (NYC/NYS) and the State of New Jersey (NJ) were consistent with concerns raised by agency reports (State of New Jersey, 2020). USDOL-OSHA inspections conducted between mid-March and early November 2020, for example, based on complaints filed and subsequent citations and fines levied against employers, suggested the majority of issues were in Region II and about respiratory protection programs that are or should be one of the major components of COVID-19 response programs (USDOL-OSHA, 2020b; USDOL-OSHA, 2020c; USDOL-OSHA 2020d). Indeed, of 51 of 178 violations leading to citations nationwide in this time period noted, 25 were in NJ and 17 were in NYC/NYS. Besides lack of compliance with general duty clause and practical issues with employer injury and illness prevention programs, the “top five failures” noted have consistently included deficiencies such as failure to have a written respiratory protection program, and provide medical evaluations, fit tests and train employees on the proper use of respirators and PPE. Recent research on U.S. mortality data (Hanage et al., 2020) has emphasized the importance of USDOL-OSHA enforcement activities and follow-up of complaints regarding PPE during the COVID-19 pandemic. One commentary noted USDOL-OSHA monitoring and enforcement, overall, has been limited due to the lack of an emergency temporary standard for infection control including respiratory protection programs. Michaels and Wagner (2020), emphasized the importance of adequate training for essential workers; Liu et al. (2020), documented the importance of training for health care professionals, and Anderson et al. (2020), studied the pathways by which aerosols enter the body via the mouth and nose through inhalation exposure in addition to airborne droplets.

Per this study’s data, possible explanations are necessary to account for prevalent inconsistencies, noncompliance and what appears to be a more scattered-ad hoc approach to developing and implementing a COVID-19 response program. Upon retrospection and review, no singular potential explanation was likely to account for errant employer
Table 5
Survey of COVID-19 response and respiratory protection programs, USDOL-OSHA Region II, 2020 COVID-19 pandemic: by authorized trainer type. Please note: “N/A, DNK” = participants did not know and/or did not want to answer question (not counted as missing data).

| Type of OSHA authorized trainer | General Industry (GI) | Construction (C) | Both GI and C |
|--------------------------------|-----------------------|-----------------|---------------|
| N (miss-ing) | Ye | % | No | % | No | % | N/A, DNK | % | N (miss-ing) | Ye | % | No | % | No | % | N/A, DNK | % | N (miss-ing) | Ye | % | No | % |
| Q3_Do you think your employer’s COVID-19 Response Program is useful / will be useful and practical, or, is less than practical? | 38 (0) | 35 | 92.1 | 2 | 5.3 | 1 | 2.6 | 219 (0) | 194 | 88.6 | 17 | 7.8 | 8 | 3.7 | 78 (0) | 66 | 84.6 | 6 | 7.7 | 6 | 7.7 |
| Q4_Does your employer’s COVID-19 Response Program assess if employees know and understand the program? | 38 (0) | 25 | 65.8 | 9 | 23.7 | 4 | 10.5 | 219 (0) | 163 | 74.4 | 40 | 18.3 | 16 | 7.3 | 78 (0) | 49 | 62.8 | 13 | 16.7 | 16 | 20.5 |
| Q5_Does your employer’s COVID-19 Response Program have corresponding formal training component? | 38 (0) | 17 | 44.7 | 18 | 47.4 | 3 | 7.9 | 213 (6) | 109 | 51.2 | 96 | 45.1 | 8 | 3.8 | 77 (1) | 45 | 58.4 | 23 | 29.9 | 9 | 11.7 |
| Q7**_Before WHO declared COVID-19 a global pandemic (March 11, 2020) did your employer have in place a full respiratory program? | 38 (0) | 18 | 47.4 | 13 | 34.2 | 7 | 18.4 | 211 (8) | 100 | 47.4 | 92 | 43.6 | 19 | 9.0 | 76 (2) | 35 | 46.1 | 33 | 43.4 | 8 | 10.5 |
| Q8**_After WHO declared COVID-19 a global pandemic (March 11, 2020) did your employer have in place a full respiratory program? | 38 (0) | 20 | 52.6 | 9 | 23.7 | 9 | 23.7 | 210 (9) | 102 | 48.6 | 87 | 41.4 | 21 | 10.0 | 76 (2) | 37 | 48.7 | 26 | 34.2 | 13 | 17.1 |

*Example given with question: Does it have a demonstration and validation exercise so an employee knows how to wear and maintain a respirator or mask?
**WHO = the World Health Organization. And, for purposes of questions 7–8, a full respiratory program, includes respirator fit testing, medical clearances for use, formal training and a designated respiratory administrator known to employees whose work activity required wearing a respirator?

decisions and subsequent shortcomings, but instead was more likely due to a confluence of factors, including responding under duress during a national health crisis.

An informational reference bias may have hindered the ability of employers to make clear uniform decisions. Such divergent information often varied by source and stymied decisions made under uncertainty and duress; instead, there should have been a more deliberate approach based upon accurate information and data flowing into a decision maker’s environment (Schultz et al., 2010). Both novices and experts, i.e., those who practice injury and illness risk aversion, may be susceptible to such compelling defaults (Kozhevnikov et al., 2001). These mixed messages could have confused employers and nudge them toward incorrect assumptions.

Examples of inconsistent mixed messages from sources of authority are abundant. As early as the beginning of March 2020, the Office of the U.S. Surgeon General erroneously advised how wearing face masks could actually increase a person’s risk of contracting COVID-19; this advice was later retracted and reversed (Perrett, 2020). Mass media examples were also numerous and were often with layperson, not expert material on actual proper use of various respiratory protections as well as on the severity and consequences of the COVID-19. Early evidence suggests that media’s viewpoint may have led to reference bias to COVID-19, thereby presumably affecting occupational response (Bertrand et al., 2020).

Furthermore, media information was typically presented in generalities, skewed toward public health measures instead of specific worksites or an occupational context. Serious omissions were common place, e.g., the fact the use of N95’s with exhaled air valves protected wearers but could actually spread the virus to nearby individuals was not distinguished from other dual-protection N95’s (Kellher, 2020). Incomplete information could have been absorbed as misinformation and migrated into the workplace without regulatory safeguards (NIOSH-CDC, 2020).

During emergencies overwhelming local and state level resources, acting within the bounds of federalism, the USDOL-OSHA can be a critical resource providing technical information from an expert perspective of occupational safety and health and creating a single uniform approach to a universal hazard during a national emergency. Within the National Response Framework (NRF) Worker Safety and Health Support Annex, the USDOL-OSHA can lend its expert assistance...
and support lower jurisdictions assisting essential workers, first responders and first receivers. Despite the fact the Office of the Secretary of Health and Human Services (HHS) declared a public health emergency on January 31, 2020, a NRF mechanism through NIMS, however, was never triggered.

Confusion between public health guidelines and workplace guidelines have similar hazard control mechanisms, the two protocols substantially differ in context. Specifically, within the occupational context, a hazard exposure is task-centric while public health hazard falls within the power of health departments working with first responders including police to protect the general public in all endeavors, a much broader space. This study also suggested inappropriate terminology passed into

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Table 6  
Survey of details of respiratory protection programs, USDOL-OSHA Region II, 2020 COVID-19 pandemic: by authorized trainer type.

| Type of OSHA authorized trainer | General Industry (GI) | Construction (C) | Both GI and C |
|-------------------------------|-----------------------|------------------|---------------|
| N (missing) | Internal development % | Externally derived % | N/A, DNK % | N (missing) | Internal development % | Externally derived % | N/A, DNK % | N (missing) | Internal development % | Externally derived % | N/A, DNK % |
| Q1_ What was the primary source of information/materials for your employer's COVID-19 Response Program? | | | | | | | | | | | |
| 38 (0) | 12 | 31.5 | 24 | 63.2 | 2 | 5.3 | 219 (0) | 65 | 29.7 | 141 | 64.4 | 13 | 5.9 | 78 (0) | 15 | 19.2 | 54 | 69.2 | 9 | 11.5 |
| Q2_ Did your employer's initial COVID-19 Response Program address specific tasks for specific employees perform or was was your COVID-19 Response Program more a general/generic guideline-type of program? | | | | | | | | | | | |
| 38 (0) | 16 | 42.1 | 20 | 52.6 | 2 | 5.3 | 219 (0) | 108 | 49.3 | 103 | 47.0 | 8 | 3.7 | 78 (0) | 41 | 52.6 | 30 | 38.5 | 7 | 9.0 |
| Q3_ To ensure employees follow your employer's COVID-19 Response Program: Does your employer provide an action/more formal means of monitoring the program, or is it a more passive/self-regulated program? | | | | | | | | | | | |
| 38 (0) | 17 | 44.7 | 19 | 50.0 | 2 | 5.3 | 213 (6) | 126 | 59.2 | 80 | 37.6 | 7 | 3.3 | 77 (1) | 36 | 46.8 | 30 | 39.0 | 11 | 14.3 |
common vernacular without warnings. Respirators having a National Institute of Occupational Safety and Health (NIOSH) rating of an N95 entered a common lexicon without a safe use protocol. By heuristic default, employers may have grafted public health information for dissemination directly into their workplaces without program or compliance management. The ubiquitous and patently incorrect use of the term PPE in a public health context was misleading and yet stands in both the lay-general public and expert public health lexicons even at this advanced date, hereby creating confusion. In an occupational setting, a respirator serves a single purpose, i.e., to protect the person wearing it, hence the term personal protection equipment or commonly PPE. However, in a public health context, respiratory protection serves two distinct purposes: first, to protect the person wearing it, and second, to protect other persons presumably within the contagious sphere of the wearer. The term PPE is not only a misnomer but could have led to confusion among employers. A correct description of the respiratory protection worn for public health concerns should perhaps be personal and public protection equipment (PPPE), not PPE.

4.1. Limitations

This study had its known limitations. First, as a cross-sectional survey, even with IRB approval, we could not identify nor follow-up with any responding authorized trainers. Additionally, while we could describe certain socio-demographics of the target population of authorized trainers 2015–2020 (see Tables 1 and 2), we were limited in stratifying data analyses by gender identity, race-ethnicity or state of residence or primary employment. We assumed each trainer worked throughout NJ and NYC/NYS. Third, we based some questions on the WHO declaration of the COVID-19 pandemic, not state executive orders—given a relative lack of federal agency declarations or
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guidance and as the States of NJ and NY have USDOL-OSHA approved plans.

4.2. Strengths

This study also had known strengths. This research effort was to utilize the most common context for the nexus between public health and occupational S&H management, the employed authorized trainers. We had a good response rate for a one-month online survey, nearly 30%; but, it was not the majority, and also not representative of the entire Region II. Nevertheless, data likely reflected employers in Region II with a safety culture and an existing knowledge of safety management systems, e.g., regular employee training and program evaluation.

5. Conclusions

Regardless of the nature of workplace safety and health (S&H) hazards, employers must address and control them. Workplace activities rarely occur in isolation away from externalities as is the case with a public health crisis like the COVID-19 pandemic in 2020–2021. In varying capacities, private employers and public stakeholders (regulators and jurisdictional governmental authorities) have responsibilities to safeguard workers. Expert survey responses provided data for learning opportunities to offset the degree and severity of new, novel or external risks potentially entering workplaces in the future. The present study’s data highlighted, overall and by authorized trainer type, what occurred during initial stages of the COVID-19 pandemic in spring-summer 2020 in U.S. Region II with respect to worksite S&H response programs including respiratory protection programs.

Based upon the present study, the following recommendations can provide guidance and best practice for both private and public employers, regulators and governmental agencies. Employers should implement USDOL-OSHA injury and illness prevention programs including reporting hospitalizations leading to missed work time due to COVID-19, whether or not exposure to SARS-CoV-2 occurred at a worksite or in a community. Employers and their employed authorized S&H trainers should enhance education efforts about infectious diseases beyond bloodborne pathogens, i.e., other bacterial and viral agents in droplets and aerosols via various pathways leading to inhalation exposure in both indoor and outdoor settings.

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