VIRTUAL TRAINING INITIATIVE FOR PROTECTING YOURSELF FROM COVID-19 IN THE WORKPLACE

EVALUATION & OUTCOMES

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SCHOOL OF PUBLIC HEALTH
BACKGROUND

NIEHS uses a virtual training approach

The training tool online March 22, 2020.

As of April 10, 2020
963 persons registered
380 responded to the post evaluation questions

The registration and evaluation data was collected through Vivid Learning Systems online

IBM SPSS Statistics Version 26 was used to analyze the data.
<table>
<thead>
<tr>
<th>Question</th>
<th>“Yes” N</th>
<th>“Yes” %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you had any previous training on infectious diseases?</td>
<td>543</td>
<td>56.4</td>
</tr>
<tr>
<td>Do you have a role in the COVID-19 response?</td>
<td>635</td>
<td>65.9</td>
</tr>
<tr>
<td>Are you an essential employee in your organization?</td>
<td>746</td>
<td>77.5</td>
</tr>
</tbody>
</table>
Table 2: The training has prepared me to recognize COVID-19 hazards on the job (n=380)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>193</td>
<td>50.8</td>
</tr>
<tr>
<td>Agree</td>
<td>162</td>
<td>42.6</td>
</tr>
<tr>
<td>Neutral</td>
<td>21</td>
<td>5.5</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Table 3: The training has increased my knowledge on how to control COVID-19 workplace exposures (n=380)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>225</td>
<td>59.2</td>
</tr>
<tr>
<td>Agree</td>
<td>127</td>
<td>33.4</td>
</tr>
<tr>
<td>Neutral</td>
<td>25</td>
<td>6.6</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>3</td>
<td>0.8</td>
</tr>
</tbody>
</table>
The training has prepared you to recognize COVID-19 hazards on the job.

The training has increased my knowledge on how to control COVID-19 workplace.

Figure 1. Evaluation data from Tables 2 and 3 (%)
Table 4: What is your primary industry? (n=963)

<table>
<thead>
<tr>
<th>Industry</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care</td>
<td>333</td>
<td>34.6</td>
</tr>
<tr>
<td>State or local government</td>
<td>172</td>
<td>17.9</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>92</td>
<td>9.6</td>
</tr>
<tr>
<td>Federal Government</td>
<td>72</td>
<td>7.5</td>
</tr>
<tr>
<td>Construction</td>
<td>39</td>
<td>4.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>22</td>
<td>2.3</td>
</tr>
<tr>
<td>Food Services</td>
<td>19</td>
<td>2.0</td>
</tr>
<tr>
<td>OH&amp;S</td>
<td>18</td>
<td>1.9</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>15</td>
<td>1.6</td>
</tr>
<tr>
<td>Education</td>
<td>14</td>
<td>1.5</td>
</tr>
<tr>
<td>Social Assistance</td>
<td>14</td>
<td>1.5</td>
</tr>
<tr>
<td>Transportation</td>
<td>14</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>139</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Note: Similar responses have been partially grouped together.
Table 5: What is your occupation? (n=963)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>110</td>
<td>11.4</td>
</tr>
<tr>
<td>Health &amp; Safety</td>
<td>108</td>
<td>11.2</td>
</tr>
<tr>
<td>Firefighter</td>
<td>70</td>
<td>7.3</td>
</tr>
<tr>
<td>Doctor &amp; Physician</td>
<td>57</td>
<td>5.9</td>
</tr>
<tr>
<td>Military</td>
<td>32</td>
<td>3.3</td>
</tr>
<tr>
<td>Tower Technician</td>
<td>27</td>
<td>2.8</td>
</tr>
<tr>
<td>Administrative</td>
<td>12</td>
<td>1.2</td>
</tr>
<tr>
<td>Emergency Medical</td>
<td>11</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td>536</td>
<td>55.7</td>
</tr>
</tbody>
</table>

Note: Similar responses have been partially grouped together.
## KIRKPATRICK EVALUATION FRAMEWORK

<table>
<thead>
<tr>
<th>Level Name</th>
<th>Level Meaning</th>
<th>When is it measured?</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Reaction</td>
<td>Satisfaction with training</td>
<td>Immediately after training</td>
<td>Short term</td>
</tr>
<tr>
<td>2-Learning</td>
<td>Acquire intended knowledge, skills, awareness, confidence</td>
<td>Immediately after training</td>
<td>Short term</td>
</tr>
<tr>
<td>3-Behavior</td>
<td>Apply what was learned from training to their job</td>
<td>6 months-1 year</td>
<td>Intermediate</td>
</tr>
<tr>
<td>4-Results</td>
<td>Achieving the training objective(s)</td>
<td>&gt;1 Year</td>
<td>Long Term</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Attribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training helped to cause outcomes</td>
<td>Training caused the outcomes</td>
</tr>
</tbody>
</table>
DID THE TRAINING CAUSE THE OUTCOMES?

- **ATTRIBUTION** is nice, but rare, requires:
  - *experiment* (random assignment – almost impossible in training evaluation), or
  - well-designed *quasi-experimental* study (control group, pre-post, high response rate)

- Arguing that the training made a **CONTRIBUTION** is more likely -- and also valuable
  - Use longitudinal studies, case studies, surveys, natural experiments

- Due to the emerging, rapidly evolving situation (pandemic & need for on-line training)
  - Currently only 2 evaluation questions – no pre-post test, low response rate

- To increase our confidence that the training **CONTRIBUTED** to the outcomes, encourage grantees to:
  - 5 pre-post knowledge questions using “polls” in software
  - Increase response rate by requiring those questions be completed
  - 6-12 month follow-up of trainees: individual & organizational-level actions taken
## INTENDED OUTCOMES OF COVID-19 TRAINING INITIATIVE

<table>
<thead>
<tr>
<th>Short Term (Immediate)</th>
<th>Intermediate (6 Months)</th>
<th>Long Term (&gt;1 Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT QUESTIONS</strong> Trainees report:</td>
<td><strong>POTENTIAL QUESTIONS</strong></td>
<td><strong>POTENTIAL QUESTIONS</strong></td>
</tr>
<tr>
<td>▪ Being better prepared to recognize COVID-19 hazards at work</td>
<td>▪ Integration of materials into workplace safety training</td>
<td>▪ Improved organizational and community capacity to respond to COVID-19 and other infectious diseases</td>
</tr>
<tr>
<td>▪ Increased knowledge on control of COVID-19 workplace exposures</td>
<td>▪ Changes in organizational practices, plans, policies, and use of hierarchy of controls that support worker safety and infection control</td>
<td>▪ Safer workplaces through enhanced worker training and work-related infection control</td>
</tr>
<tr>
<td><strong>POTENTIAL QUESTIONS</strong></td>
<td>▪ National network able to respond to infectious disease events and provide high quality biosafety trainings across worker populations with exposure potential</td>
<td>▪ Improved safety culture in workplaces with exposure potential</td>
</tr>
<tr>
<td>▪ Trainers prepared to train workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Organizational capacity to deliver training using methods adapted to social distancing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Pre-post questions on knowledge, skills, awareness, confidence, empowerment and reduced anxiety to COVID-19 and other infectious diseases</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THANK YOU!

If you have any questions or comments, please feel free to reach me at eric.persaud@downstate.edu

You can learn more about attribution vs. contribution in a CDC presentation:

These slides were developed with Paul Landsbergis, PhD
SUNY Downstate Health Sciences University School of Public Health