National Safety Council

Overdose Emergency Planning Tool
Risk Factors and Methodology Report
September 2025

RespondReady WORKPLACE™
an nsc program

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The National Safety Council is a nonprofit organization whose mission is to save lives by preventing injuries and deaths at work and on the road through leadership, research, education and advocacy. NSC developed the Respond Ready Workplace program, which focuses on workplace naloxone awareness, access and adoption. NSC received financial support from Emergent BioSolutions Inc., the manufacturer of NARCAN® Nasal Spray, to conduct independent research related to opioid overdose emergency preparedness. The sponsor had no role in research design, data collection, analysis or interpretation.

EHS Compliance Services Inc. is a consulting firm that helps industrial enterprises protect workers, the environment and corporate reputation through a suite of services that focus on regulatory compliance, worker wellbeing and risk management. EHSCSI was contracted by NSC to organize and facilitate focus groups composed of industry experts to ascertain risk factors that should be included in a formula and associated tool to estimate the amount of naloxone recommended in workplaces.

National Safety Council

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Background and Introduction

This report provides foundational input for the development of the National Safety Council Overdose Emergency Planning Tool, a resource designed to help employers in the United States and Canada assess the appropriate quantity of naloxone doses to maintain in the workplace. The impetus for this tool is due to the increasing risk of overdose on the job – **overdose represents nearly 10% of workplace fatalities** (National Safety Council, 2024). A majority of overdoses both on and off the job are caused by opioids. Unfortunately, only 28% of employers report being fully stocked with naloxone on worksites to address this risk (National Safety Council, 2024). This research and the associated tool aim to address barriers associated with supplying naloxone and creating opioid overdose response programs by providing evidence-informed recommendations on the quantity of naloxone to maintain in the workplace.

This report synthesizes findings from a brief literature review, a review of relevant websites including the Centers for Disease Control and Prevention and the Department of Labor, expert-led focus groups and a follow-up survey. These efforts identified six key risk factors that should be considered when determining naloxone quantity: proximity to naloxone, emergency medical service response time, industry/job-specific risk, geographic risk, workforce size and public access to the site. The insights presented here informed the structure and logic of the Overdose Emergency Planning Tool, ensuring it is evidence-informed, practical and responsive to the diverse needs of workplaces confronting the opioid crisis.

Naloxone is an opioid overdose reversal medication that temporarily stops the impact opioids have on the brain, returning a person to normal breathing. In the United States, some formulations are available over the counter for a convenient opportunity to integrate this lifesaving tool into organizational first aid or emergency preparedness programs. Learn more about naloxone here.

Literature and Website Review

Methods

Leslie Hammer, Ph.D.; Nicholas Smith, Ph.D.; and Kahlilah Guyah, CSP, CHMM, the EHSCSI research team, reviewed existing peer-reviewed literature and relevant federal websites (e.g., CDC and DOL) to gather information, gain insights and identify factors relevant to overdose risk. The literature review began with a search using PsycINFO with the terms “workplace” and “opioid use,” filtering for meta-analyses, literature reviews and systematic reviews. This search resulted in the identification of approximately 135 studies.

Based on this review, there were very few results that focused specifically on factors influencing opioid use at work. The EHSCSI research team drew strongly on the work of Shaw et al. (2020), who identified work-related pain and work-related psychosocial stress as the main factors associated with higher opioid use, as well as that of Carnide et al. (2024), which closely mirrored the occupational and industry risk levels across the United States and Canada, respectively. More specifically, work-related pain was associated with heavy physical work demands and high-injury-risk occupations. Psychological stress was also related to opioid use as seen through increased job insecurity and high-demand/low-control/low-support occupations. Insecure work arrangements (e.g., independent contractors, temporary help) were also related to opioid use. In sum, it was concluded that the key factors identified as related to opioid use in the peer-reviewed literature included high-injury-risk occupations and industries with a high prevalence of psychosocial stress.

A secondary literature search was conducted on naloxone distribution models in the U.S. and in Canada. Most distribution models occurred in community-based opioid education and naloxone distribution (OEND; Weiner et al., 2019) programs and in community pharmacies via a standing order, statewide and provincial protocols. There is much need for improved outcomes data collected and reported in the various settings where naloxone is distributed. For example, Febres-Cordero et al., (2025) identified that OEND programs varied by occupation; most of which was found among healthcare providers and first responders. Other occupational groups, such as service industry workers, construction workers, and librarians, were underrepresented. The authors suggest that increased access to naloxone and comprehensive OEND programs are crucial for reducing opioid related overdose mortality.

Following the literature search, the research team turned to reviewing the available data from the U.S. Centers for Disease Control and Prevention, U.S. Department of Labor and the Public Health Agency of Canada websites to identify opioid overdose rates and deaths by state, provinces and territories. The CDC identifies recovery-supportive workplaces (RSW) as those that "prevent work factors that could cause or prolong substance use disorders and those that lower barriers to seeking and receiving care and maintaining recovery. A recovery-supportive workplace teaches managers and workers about substance use disorders to reduce the stigma around this." Recovery-supportive workplace programs use evidence-based policies, programs and practices to reduce multiple risk factors. A comprehensive RSW program would include an opioid overdose response program that provides naloxone and related training. This approach is consistent with *Total Worker Health*® strategies that integrate all aspects to collectively address worker safety, health and wellbeing, as discussed by the National Institute for Occupational Safety and Health.

The data from both the United States and Canada naloxone distribution models and national health data websites suggest that geographical location is another potential risk factor to consider in developing the tool; however, the complexities of these data are multifaceted and need more in-depth analysis.

Results

The literature and website reviews suggested that the two most consistent predictors of workplace opioid overdoses and deaths are type of **industry** and **geographical location**. Males are more likely to experience opioid use disorder, and this is captured in the industry variable as high-risk industries are heavily populated by males. High-risk industries are characterized by both physical and psychosocial hazards, with physical risks being more prominent due to the direct pathway from injury to medication use and psychosocial risks operating through a coping pathway. Industry and state data were presented to the focus group participants for validation and to prompt further discussion on the risk factors as described below. The industry risk classification tables are found in the Appendix.

Focus Groups

Methods

Participants

NSC invited industry experts from the following fields to be available to participate in the focus groups:

- **Emergency medicine**
- **First aid**
- **Industrial hygiene**
- **Naloxone and opioid overdose reversal medications**
- **Recovery and substance use**
- **Occupational medicine**
- **Occupational health and safety**
- **Research**

Thirty-two industry experts responded to the request from NSC to participate. The EHSCSI team invited all experts to participate in one of three scheduled focus groups during the month of May 2025. A total of 23 individuals responded to the invitation and a total of 18 participated. The goal of the focus groups was to explore and identify important factors to consider in determining the number of naloxone doses a workplace should obtain and keep available.

Facilitation and analysis

Focus groups provide an opportunity for participants to collaboratively build upon one another and offer opportunities for participants to discuss topics in a more nuanced manner through their conversations (Kamberelis & Dimitriadis, 2014). The focus groups were facilitated by the EHSCSI research team, each lasting approximately one hour. Each focus group ranged from four to seven experts. Approximately one week before each focus group took place, participants were provided with a one-page overview of the literature review and a summary of the literature review findings.

The focus groups were semi-structured. Participants were briefed on the purpose of the project and current findings from the literature review, including industry-risk-level and state-level overdose rates. Prompts were designed to elicit insights about specific opioid overdose risk factors, the recommended quantity of naloxone to maintain at worksites and the risk level for specific industries. The focus groups were recorded and then transcribed using the Microsoft Teams Transcription Application, resulting in 125 pages of transcripts (approximately 32,000 words).

Focus group data were then thematically analyzed using an inductive thematic coding approach. The coding focused on particularly relevant codes and themes (Morgan, 1997). Specifically, all relevant passages were assigned codes and similar codes were grouped into themes, representing important risk factors to consider in determining the number of naloxone doses that should be kept available at a worksite.

Results

The inductive thematic analysis of the focus groups revealed six important factors to consider for inclusion in the Overdose Emergency Preparedness Tool.

- **Factor 1: Proximity to naloxone**
- **Factor 2: Emergency medical service response time/distance to medical care**
- **Factor 3: Industry and job risk profile**
- **Factor 4: Geographic risk factors**
- **Factor 5: Public access to the site**
- **Factor 6: Workforce size**

Factor 1: Proximity to naloxone

Participants consistently emphasized the critical need to access and administer naloxone within two to four minutes from the time an individual has stopped being responsive. Participants recommended the availability of **four doses of naloxone** at each access point due to the likelihood of needing more than one dose of naloxone per overdose event, the possibility of multiple overdoses occurring at the same time and the need to have some supply remaining after responding to an event. Participants also stressed the importance of evaluating the type and layout of each worksite to determine both the appropriate number and strategic placement of naloxone, ensuring that naloxone can be reached and administered within two to four minutes from any location on the premises.

Many participants expressed relying on the requirements of the Occupational Safety and Health Administration's regulations – 29 CFR 1910.151(b), Medical Services and First Aid; 29 CFR 1926.50(c), Medical Services and First Aid (Construction); and the associated Letter of Interpretation on First Aid Requirements (2007) – which focus on the availability of adequate first aid supplies and trained personnel to administer first aid within three to four minutes of serious medical emergency. Participants also emphasized the importance of considering the facility's total square footage or acreage (horizontal distance) as well as the challenges of navigating multi-floor buildings (vertical distance) during an emergency response event.

Participants often spoke of including naloxone as an integrated part of the onsite emergency response protocol, including the storage of naloxone with first aid kits, run bags and automated external defibrillators (AEDs). When worksites involve transportation, such as buses, participants emphasized the importance of having naloxone readily available on the vehicle to ensure timely administration – ideally within two to four minutes – in the event of an opioid overdose. In these environments, maintaining proper storage conditions for naloxone is critical. Although not always explicitly mentioned by participants, it is essential that worksites adhere to the manufacturer's storage and expiration guidelines regardless of the location.

Subfactors for proximity to naloxone

Participants identified several key subfactors that should guide the quantity and strategic placement of naloxone across diverse worksite environments.

- **Number of floors:** For multistory buildings, participants recommended placing four doses of naloxone per floor to ensure timely access regardless of vertical distance or elevator availability during emergencies.
- **Location of emergency equipment:** Participants advised aligning naloxone placement with existing emergency response assets. Specifically, they recommended four doses of naloxone per AED and first aid kit, assuming these are positioned such that no employee is more than two to four minutes away from access.
- **Number of emergency response bags:** In settings where mobile emergency response bags ("run bags") are used, participants suggested equipping each run bag with four doses of naloxone, ensuring readiness for multiple simultaneous overdose events.
- **Total square footage of worksite:** Participants emphasized that the overall size of the worksite – measured in square footage or acreage – should be a primary consideration when determining the number and distribution of naloxone. While there are currently no specific regulations linking workplace size to emergency equipment placement, larger facilities may require additional naloxone to ensure that all personnel in each area are able to access naloxone within two to four minutes, especially in expansive warehouses, manufacturing plants and outdoor worksites. Strategic placement should account for both the horizontal distance employees may need to travel and any physical barriers that could delay emergency response.

Factor 2: Emergency medical service response time/distance to medical care

Participants highlighted the importance in considering the emergency medical service response time and distance of the worksite to a medical care facility. While some workplaces have onsite medical care, others do not. Related considerations may include sites that are rural, farther from a medical care facility or those that have a longer EMS response time. Additionally, participants explained that sometimes multiple doses of naloxone might need to be administered while awaiting EMS care, emphasizing the need for more than two doses onsite.

It's important to note that naloxone is not a substitute for medical care – calling 911 is paramount in any potential overdose emergency.

Subfactors for EMS response time/distance to medical care

Participants emphasized that the time required for EMS to arrive and navigate to the potential overdose event in addition to the proximity to health care facilities are critical considerations in naloxone planning. These factors influence how long a person may need to wait for professional medical intervention after an overdose event.

- **Proximity to health care and emergency response:** Worksites located in remote or rural areas with longer EMS response times may require additional naloxone to bridge the gap until professional care arrives. Participants recommended evaluating average drive times to the nearest emergency medical facility as part of site risk assessments.
- **Onsite medical resources:** The presence of onsite medical personnel – such as emergency medical technicians, nurses or a dedicated medical clinic – can significantly reduce response time. Participants noted that sites with such resources may be better equipped to respond quickly but still recommended naloxone availability to support immediate intervention.

Factor 3: Industry and job risk profile

Consistent with the review of the literature and especially drawing on Shaw et al. (2022) and Carnide et al. (2024), participants noted that industry-level risk along with risk profiles associated with specific jobs are very important factors in determining the necessary amount of naloxone at worksites. Participants explained that some jobs may have increased physical demands or there may be heightened propensity of injury in specific job roles, possibly leading to higher opioid prescription rates (a contributing factor for substance misuse and substance use disorder). Other industries that are considered to have higher levels of stress and job demands also were noted by participants to be at higher risk for opioid use rates. Thus, risk profiles are based on a combination of physical and psychosocial risks.

Using an industry risk classification as described in the Appendix, participants recommended tailoring naloxone quantities based on whether the industry is categorized as low, medium or high risk. High-risk industries (e.g., construction, manufacturing) may warrant more widespread naloxone access due to elevated injury and substance use potential among high-risk industries. Participants highlighted that the nature of the work performed – especially in high-risk industries – should inform naloxone distribution. Jobs with higher physical demands or injury rates may correlate with increased substance use risk.

Within specific industries, different risk profiles may exist due to aspects such as characteristics of the job, selection procedures or safety protocols – including comprehensive drug testing programs. Participants noted two relevant industry examples.

- **Distribution and logistics:** While vehicle drivers have comprehensive drug screening as required by Department of Transportation regulations, porters and individuals performing loading and unloading operations are not legally required to complete drug screening and have a higher risk of physical injury due to the nature of their work.
- **Construction:** Although construction is classified as a high-risk industry, many roles within it are administrative and do not involve the same physical demands that trade or site-based construction workers face – demands often associated with chronic pain.

Factor 4: Geographic risk factors

In terms of geographic risk factors, consistent with the findings from the review of the United States and Canada naloxone distribution models and national health data websites, participants indicated that geographical risk factors such as opioid overdose rate, opioid overdose mortality rate, substance use disorder rate and opioid prescription or dispensing rate are important considerations in determining the amount of naloxone available at a worksite. Also, participants indicated that these types of data could capture other individual-level risk factors that may not be readily available to site personnel.

Subfactors for geographic risk factors

Participants stressed the importance of considering regional data on opioid use and overdose rates when planning naloxone deployment. Geographic trends can reveal underlying risk levels that vary significantly by location.

- **Regional risk:** Participants suggested using population-based metrics to guide naloxone distribution, especially in areas with high overdose rates or opioid prescription volumes.
- **Prescription rates:** Regions with elevated opioid prescription rates may indicate a higher likelihood of opioid misuse, prompting the need for increased naloxone availability.

- **Overdose death rates by geography:** Geographic-level (i.e., state, province, county, territory) overdose mortality data was cited as a key indicator for assessing naloxone needs. Participants recommended prioritizing sites in areas with higher overdose death rates.

Factor 5: Public access to the site

Another relevant factor that participants discussed is the need to consider the extent to which the public had access to the worksite. These discussions focused on the extent to which individuals who were not workers (employees and non-employees, including contractors, contingent workers, etc.) were at the worksite, including if the site was available to customers or clients (such as in the hospitality industry). In addition, consideration was given to the extent to which visitors may access the site.

Subfactors for public access to the site

Participants noted that the degree of public access to a worksite influences the potential for overdose events involving non-employees. Sites open to the public may require additional naloxone to protect visitors.

- **Public access status:** Participants recommended assessing whether the site is open to the public (e.g., retail, transportation hubs) as a baseline factor in naloxone planning.
- **Public visitor volume:** Using the same ratio applied to workforce size (discussed below), participants suggested four doses of naloxone per 100 public visitors present at any one time, ensuring coverage for potential overdose incidents involving non-employees.

Factor 6: Workforce size

Participants explained that the number of workers onsite should be considered in determining the stock of naloxone. Importantly, workforce size may be calculated by the number of individuals (including employees, contractors, contingent workers and other workers) who are at the actual worksite, with consideration that some workers are remote or hybrid workers. Relatedly, participants noted that multiple shifts during the workday may impact the number of workers onsite at any one time and should be considered when determining the amount of naloxone onsite.

Importantly, some participants also included a minimum number of required doses at any worksite. Different recommendations were made in terms of specific numbers of naloxone doses per worker, ranging from two doses per 25 workers to two doses per 50 workers.

Subfactors for workforce size

The number of employees onsite during a given shift was consistently cited as a foundational metric for determining naloxone quantity needs.

- **Naloxone ratio per worker:** Participants recommended a baseline of four doses of naloxone per 100 onsite workers per shift, ensuring adequate coverage for potential overdose events.
- **ANSI first aid kit standards:** Participants referenced the American National Standards Institute standard ANSI Z308.1-2021 Minimum Requirements for Workplace First Aid Kits and Supplies to align naloxone planning with existing first aid kit requirements.
    - For high-risk workplaces:
        - 1 small first aid kit for fewer than 5 people
        - 1 medium first aid kit for 5–25 people
        - 1 large first aid kit for more than 25 people
    - For low-risk workplaces:
        - 1 small first aid kit for fewer than 25 people
        - 1 medium first aid kit for 25–100 people
        - 1 large first aid kit for more than 100 people
- **CSA first aid kit standard:** The CSA Group has an equivalent standard, CSA Z1220:24, First Aid Kits for the Workplace, which also defines three types of first aid kits – personal (type 1), basic (type 2) and intermediate (type 3) – and further describes the contents required in each. The standard specifies the type and number of kits required based on the number of workers per shift.

Workers per Shift	Personal Kit Options	Basic Kit Options	Type 3 (Intermediate) Kit Options
1 employee working in isolation	1 Personal	Not applicable	Not applicable
2–25	Not applicable	1 Small	1 Small
26–50	Not applicable	2 Small or 1 Medium	2 Small or 1 Medium
51–100	Not applicable	4 Small, or 2 Medium, or 2 Small + 1 Medium, or 1 Large	4 Small, or 2 Medium, or 2 Small + 1 Medium, or 1 Large

These standards were used as a proxy by some focus group participants to estimate naloxone needs based on workforce size and risk level.

Follow-Up Survey

Methods

Following the qualitative analysis of the focus groups, industry experts were provided with a one-page summary of the six factors identified in the focus groups and invited to complete a survey to evaluate the six risk factors. First, the participants were asked to rank the risk factors from most important/relevant to least important/relevant to determine the amount of naloxone a workplace should have. Second, the research team asked the participants to add information on any additional factors that were not included.

Results

In total, 16 industry experts responded of 30 invited to participate (53% response rate). The follow-up survey was sent to those who participated in the focus groups as well as to those experts who were unable to participate in the focus groups. Table 1 summarizes the average ranking for each factor. Overall, industry experts consistently identified "proximity to naloxone" and "EMS response time/distance to medical care" as the top-ranked and most important dimensions, followed by "Industry/job-specific risk profile." More variability was observed among ratings for the three lower-priority dimensions, and thus the ordering of the three lower-priority dimensions should be interpreted more cautiously.

Table 1: Risk Factor Ranking Results

Factor	Mean Rank	Standard Deviation Rank
Factor 1: Proximity to naloxone	1.69	1.08
Factor 2: EMS response time/distance to medical care	2.38	1.45
Factor 3: Industry/job-specific risk profile	3.50	1.71
Factor 4: Geographic risk factors	4.00	1.63
Factor 5: Public access to the site	4.06	1.48
Factor 6: Workforce size	4.13	1.31
Note: Ranking based on numbers 1 through 6; 1 = most important and 6 = least important		

Overdose Emergency Planning Tool Methodology

Overview

Upon the completion of the above research, NSC reviewed the findings and identified the key variables to include in the Overdose Emergency Planning Tool. Of the six factors identified in the research, five were utilized to estimate workplace naloxone quantity:

- **Workforce size**
- **EMS response time/distance to medical care**
- **Industry risk**
- **Public access to the site**
- **Proximity to naloxone**

Geographic trends were not integrated into the formula due to their fluctuating nature. This factor and varying subfactors were incorporated into the tool's educational guidance.

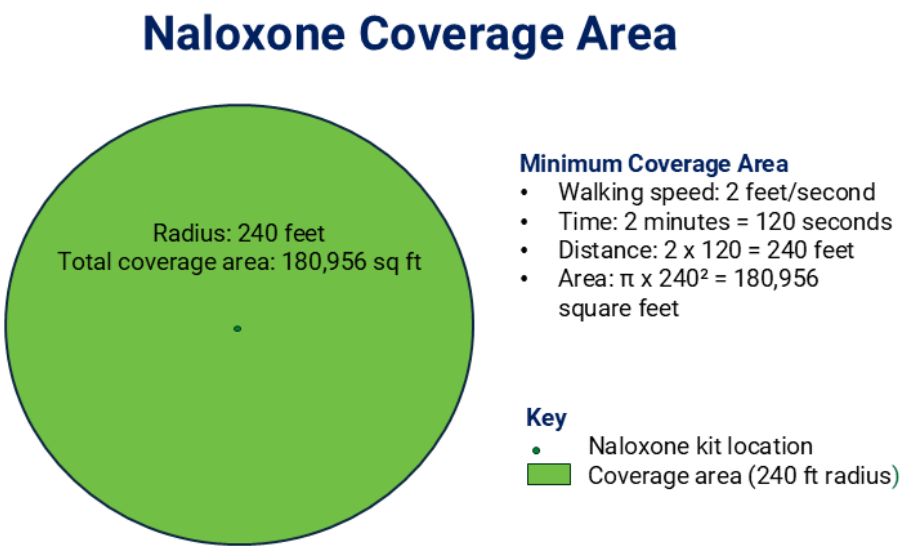
Workforce size is captured to inform the baseline recommendation of the tool. Users provide the maximum number of workers at any shift (including contractors, contingent staff and temporary personnel), utilizing the recommendation of **four naloxone doses per 100 workers** as a starting point for all workplaces. This is a proxy adapted from the ANSI Z308.1-2021 standard for workplace first aid kits, which specifies one large first aid kit for more than 100 people in a low-risk workplace.

EMS response time, industry risk and public access to the site are integrated into an average risk score, which mediates the baseline recommendation. Risk scores identified for the calculation are as follows:

- **EMS response time/distance to medical care**
  - High risk: more than 10 minutes → score = 3
  - Medium risk: between 4 and 10 minutes → score = 2
  - Low risk: less than 4 minutes → score = 1
- **Industry risk** (per Appendix rank)
  - High → score = 3
  - Medium → score = 2
  - Low → score = 1

- **Public access to the site**
  - High risk: open access with high foot traffic → score = 3
  - Medium risk: limited or scheduled access → score = 2
  - Low risk: no public access → score = 1

Proximity to naloxone was integrated in the calculations by capturing the number of floors and approximate square footage. A minimum of **four doses per floor** is applied to ensure rapid access in multilevel facilities. Square footage is an optional input of the tool that users can approximate and adjust. Although no peer-reviewed research or regulatory standard provides a fixed constant to directly translate square footage into time or risk, the research team utilized a conservative planning approach based on walking speed and a two- to four-minute access window recommended by focus group participants. Peer-reviewed studies suggest that walking speed in emergency scenarios – particularly in obstructed or industrial environments – ranges from 2.0 to 2.5 feet per second. Based on this, the maximum distance a responder could reasonably travel to access naloxone within two to four minutes is approximately 240 to 600 feet. This supports a conservative planning radius of 240 feet, which translates to a coverage area of approximately 180,956 square feet. The diagram below demonstrates this planning radius:



Therefore, the calculations use a recommendation of **four doses of naloxone per 180,956 square feet**. Assumptions include:

- Direct path to naloxone without delay
- Obstructed environment typical of manufacturing settings
- Conservative walking speed based on peer-reviewed studies
- Circular coverage area for simplicity
- No vertical travel (e.g., stairs or elevators)

Calculation method

The below steps review the process utilized to create the naloxone quantity recommendations for users once they have provided their unique inputs in the Overdose Emergency Planning Tool:

- **Step 1 – Score the three mediating factors (EMS response time, industry risk and public access to the site)**
  - Each factor is assigned a risk score of 1 to 3 based on user inputs and the above scoring method
- **Step 2 – Calculate the average risk score**
  - An average is calculated across the 3 risk scores
- **Step 3 – Assign risk level and multiplier based on the average risk score**
  - 1.0 – 1.4 = low risk → multiplier 1.0
  - 1.5 – 2.4 = medium risk → multiplier 1.25
  - 2.5 – 3.0 = high risk → multiplier 1.5
- **Step 4 – Apply the baseline formula**
  - Baseline doses recommended = (maximum number of workers ÷ 100) × 4 doses
- **Step 5 – Adjust by risk**
  - Doses recommended = baseline doses × risk multiplier
- **Step 6 – Rounding**
  - Round up to the nearest whole dose to ensure adequate coverage
- **Step 7 – Modify by square footage (optional)**
  - Modified doses recommended = (approximate square footage ÷ 180,956 square feet) x 4 doses
  - If this calculation produces a higher total than the baseline recommendation, the higher recommendation is used

Tool scope

The naloxone quantity recommendations are based on over-the-counter nasal spray products (single-dose devices containing 3 mg or 4 mg per dose) available in the United States. Results are expressed in terms of total doses. The Overdose Emergency Planning Tool is intended for employers and safety professionals in the United States and Canada. In addition to providing quantity recommendations, it connects users to information on optimal naloxone placement, applicable state or provincial laws and steps for building a comprehensive opioid overdose response program.

Conclusion and Limitations

This report serves as a critical input to the development of the NSC Overdose Emergency Planning Tool by identifying and validating key factors that influence workplace overdose risk and naloxone needs. Through a comprehensive process involving literature review, expert focus groups and survey analysis, six core risk factors emerged as essential to consider for inclusion in the Overdose Emergency Planning Tool and related recommendations. These include proximity to naloxone, EMS response time, industry and job-specific risk profiles, geographic risk factors, workforce size and public access to the worksite.

Of the six primary factors identified in the research, five factors (proximity to naloxone, EMS response time, industry risk, workforce size and public access to the site) were included in the formula to provide the quantity recommendation. The geographic risk factor and various subfactors were included in the educational content of the tool. The findings underscore the importance of a tailored, risk-informed approach to naloxone deployment in the workplace.

It is important to note that there are limitations to this research. Primarily, there is a scarcity of peer-reviewed studies informing naloxone quantity considerations in workplace settings. There is also a lack of guidance from standards-making bodies that provide specific recommendations related to the quantity of naloxone and related placement considerations. Therefore, this research leans heavily on expert feedback to better quantify and provide an informed foundation for naloxone quantity recommendations. Furthermore, each organization has unique risks and considerations related to determining the appropriate amount of naloxone to provide. This research and the associated Overdose Emergency Planning Tool should be viewed as a starting point that is further refined after evaluating individual worksite factors.

For more information on naloxone and how to build an opioid overdose response program, visit **nsc.org/respondready.**

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Appendix

Industry Risks Based on Literature Review and Focus Groups

The industries identified in low-, medium- and high-risk categories are listed in Table A below.

Table A: Industry Risk Categories

Low-Risk Industries	
Industry	Description
Corporate and Office-Based Work	Financial services (banks, insurance companies, investment firms)
Information Technology & Software Development	Tech companies and software engineering firms
Education and Research	Universities and research institutions Libraries and academic publishing
Professional and Scientific Services	Architecture and engineering firms Scientific research labs (non-hazardous)
Medium-Risk Industries	
Industry	Description
Hospitality and Entertainment	Hotels and resorts Restaurants and food service
Transportation and Delivery Services	Public transit (bus, subway, train operators) Rideshare and taxi drivers
Retail and Customer Service	Supermarkets and grocery stores Department stores and shopping
Health Care and Social Services	Home health care providers Assisted living and nursing homes
Education and Childcare	Schools (teachers, administrative staff, maintenance)
Warehousing and Light Industrial Work	Distribution centers Postal services

High-Risk Industries	
Industry	Description
Construction and Skilled Trades	General construction (residential and commercial) Roofing Demolition work Heavy equipment operation Masonry, concrete work and welding
Manufacturing and Industrial Work	Metalworking and fabrication Assembly line and factory work Logging and sawmills Chemical and petroleum manufacturing Industrial machinery operations
Transportation and Logistics	Commercial trucking and freight transport Warehousing and distribution centers Maritime shipping and dock work Railroad operations Aviation ground crews
Public Safety and Emergency Response	Firefighters Law enforcement officers Paramedics and emergency medical technicians Search and rescue teams
Energy and Utilities	Oil and gas extraction Mining Electrical line work Wind turbine and solar panel installation Water and sewage treatment facilities
Agricultural, Fishing and Forestry	Crop farming and harvesting Livestock care and ranch operations Commercial fishing and aquaculture Forestry management and tree planting Pest control and irrigation system maintenance