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A FRAMEWORK FOR WORKPLACE HEALTH PROGRAMS IN PUBLIC SAFETY

INTRODUCTION

Public safety personnel (i.e., law enforcement officers, firefighters, emergency medical services [EMS] workers, and other first responders) face health risks due to high levels of stress, physical demands of their profession, irregular work and sleep schedules, and exposure to hazardous materials and conditions. These contribute to a variety of physical and mental health risks (13,15,24,25). Health issues impact overall well-being as well as job performance, which can lead to increased absenteeism (employees have an unscheduled absence) and presenteeism (attending work when unwell or unable to function effectively). However, successful implementation of workplace health programs in public safety occupations can address these challenges and enhance both the health of the personnel and the effectiveness of their services (14).

The traditional 40-hr workweek equates to employees spending ~71% of their awake time per year at work. Therefore, it is an ideal place for implementing health programs (20). Targeted workplace health programs can lead to better job performance, increase physical and mental readiness, and improve public trust (9,21,22). Moreover, as departments and agencies struggle with low recruitment and retention, workplace health programs can create better working environments thereby increasing career longevity of current personnel and attracting qualified candidates (14,20).

This article provides a framework for implementing a workplace health program in public safety, with a focus on improving the health outcomes of personnel in these high-risk professions based on the Centers for Disease Control and Prevention (CDC) Workplace Health Model, case studies in workplace health, and best research practices (4,9,14,20).

WORKPLACE HEALTH FRAMEWORK

Successful workplace health programs provide a coordinated and comprehensive set of health promotion and protection strategies to encourage better health of all employees. Workplace health programs should include policies and programs which address the organizational, environmental, and individual barriers to health at the workplace. Organizational barriers include internal structures or policies within the workplace that may hinder health at work (e.g., leadership support, funding, time allocation). Environmental barriers composed of both physical and social factors may also hinder health programs (e.g., lack of healthy food options, unhealthy culture or norms). Individual barriers vary, but refer to the personal factors which may prevent employees from participating or adopting healthy behaviors (e.g., time, fear/mistrust, existing conditions, poor habits). To address each of these barriers, workplace health programs typically use strategies and interventions which fall into four broad categories: 1) health-related programs, 2) health-related policies, 3) health benefits, and 4) environmental supports (Table 1).

Although each of the strategies and interventions found in Table 1 are helpful individually, a successful workplace health program should be well-conceived and delivered. To help with building a workplace health program the proposed framework presents four key components:

1. Workplace Health Assessment
2. Program Planning
3. Program Implementation
4. Program Evaluation

TABLE 1. COMMON STRATEGIES AND INTERVENTIONS IN WORKPLACE HEALTH PROGRAMS AND EXAMPLES OF EACH CATEGORY WITHIN A FIRE DEPARTMENT

CATEGORY	DEFINITION	EXAMPLE
Health-Related Program	Opportunities available to employees at the workplace or through outside organizations to begin, change, or maintain health behaviors.	Implementing a fitness and wellness program that includes regular physical fitness assessments, workout facilities, and nutrition counseling.
Health-Related Policies	Formal or informal written statements designed to protect or promote employee health.	Mandatory annual health screenings for all firefighters, policies on smoking cessation, and guidelines for managing mental health and stress.
Health Benefits	Part of an overall compensation package including health insurance coverage and other services or discounts regarding health.	Comprehensive health insurance that covers physical therapy, mental health services, and specialized care for work-related injuries.
Environmental Supports	Physical factors at and nearby the workplace that help protect and enhance employee health.	Providing ergonomic equipment in the firehouse, access to safe walking or running paths, and healthy food options in the breakroom.

STEP 1. WORKPLACE HEALTH ASSESSMENT

Assessment of the workplace should take place at the organizational (culture, policies, and procedures), environmental (physical conditions and support), and individual (lifestyle) levels. These assessments can take place using informal and formal data collection methods but should address the current health status of the workplace and gauge employee interest in health programming. It is not worth investing time, money, or resources into initiatives that do not relate to perceived employee needs (whether real or not). With proper assessment, targeted program planning that addresses the health needs and interest of employees can lead to better employee engagement with the services/program and establish a culture of workplace health. A common method to assess workplace health is to implement the CDC Worksite Health ScoreCard®, which allows employers to determine whether they have implemented evidence-based health promotion strategies that target heart disease, stroke, hypertension, diabetes, obesity, and other related conditions (5). Moreover, the results of the survey can help identify strengths and weaknesses within the current health program and steer departments towards areas of improvement. Table 2 provides an example of CDC ScoreCard results from a fictional municipal fire department. Additionally, other free resources are available to assess organizational culture of health and well-being (e.g., American Heart Association Well-Being Works Better® Scorecard and Employer Assistance and Resource Network on Disability Inclusion Checklist for Mentally Healthy Workplaces) (1,2). Other forms of assessment include gauging employee interest, which is a key step in determining if the strategies and initiatives offered in the workplace health program will be utilized by the employees.

TABLE 2. EXAMPLE SCORECARD® REPORT FOR A FICTIONAL MUNICIPAL FIRE DEPARTMENT EMPLOYING ~70 PEOPLE.

SCORECARD® SECTION	TOTAL POINTS POSSIBLE	ALL WORKSITES	VERY SMALL WORKSITES (25 - 99 EMPLOYEES)	2023 SCORE	2023 GAP
Organizational Supports	44	32	29	13	-16
Tobacco Use	18	12	11	4	-7
High Blood Pressure	16	10	8	2	-6
High Cholesterol	13	8	6	0	-6
Physical Activity	22	14	12	4	-8
Weight Management	8	5	5	0	-5
Nutrition	24	10	8	1	-7
Heart Attack and Stroke	19	13	12	8	-4
Prediabetes and Diabetes	15	9	8	0	-8
Depression	16	11	10	0	-10
Stress Management	14	9	9	0	-9
Alcohol and Other Substance Use	9	7	6	5	-1
Sleep and Fatigue	9	4	4	2	-2
Musculoskeletal Disorders	9	5	5	2	-3
Occupational Health and Safety	18	16	15	2	-13
Vaccine-Preventable Diseases	14	12	11	9	-2
Maternal Health and Lactation Support	15	10	9	3	-6
Cancer	11	6	5	0	-5
TOTAL	294	193	173	55	-118

Compared with Very Small Worksites (25 – 99 employees), the fire department has a low total score (55), with the biggest gaps in Organizational Support, Depression, Stress Management, and Occupational Health and Safety.

STEP 2. PROGRAM PLANNING

After conducting and analyzing results from the workplace health assessments and employee interest surveys, the next step is to design a workplace health program that addresses the identified issues. Results from the CDC ScoreCard can help focus initiatives early in the planning process. For example, in Table 2, the largest gaps are found in: organizational supports, depression, and occupational health and safety. Therefore, addressing the organizational support structure and establishing leadership buy-in (policies, environment, leadership commitment and support) may be a great place to start. A community-partnered approach which engages leadership by collaborating with administration, health service providers, and union members (where appropriate) can help align policy and resources (12). Additionally, aligning goals and objectives with leadership priorities will not only help establish buy-in, but can also set the program up for potential federal funding opportunities (6,11). Furthermore, establishing a workplace health committee, which includes stakeholders at all levels to represent diverse perspective and maintain support and engagement. Furthermore, policies can be adopted or modified from existing workplace health programs by using examples from other departments or agencies (see Copple et al. for example case studies with policies) (9). Additionally, to help close the gap in the depression section, the workplace health program could provide interactive educational sessions, provide and promote lifestyle coaching and counseling, or provide mental health first aid training so employees can recognize depression or mental health issues in their co-workers. Furthermore, occupational health and safety can be addressed by planning educational programming (e.g., cancer risks for firefighters, handwashing reminders or infographics).

Although the CDC ScoreCard can provide a valuable starting point, the workplace health program is not limited to using solely its results for programming. For instance, a local police department may have an incidence of low back injuries in both dispatchers and patrol officers. The workplace health coordinator could consider injury prevention training (health-related program), ergonomic interventions (health-related policies and environmental supports), and having the insurance company explain current benefits, including access to physical therapy services (health benefits) (Table 1).

A successful workplace health program requires leadership support, focuses on impactful strategies, and is appropriately phased-in to reverse poor health (14,20). The planning process can be conducted by a sole coordinator or committee who will oversee the program. However, this individual or group of individuals should have support from leadership (e.g., financial, time allotment, role models, champions). Although the best workplace health programs address multiple risk factors across all levels, it is best to focus on a few targeted high-impact strategies (e.g., tobacco cessation programs, disease management programs) rather than attempting many that may be less effective (e.g.,

lifestyle management programs, wellness education programs) (17,18,19). Poor health takes time to develop; similarly, to reverse trends in health-related outcomes, a well-organized health program rollout will also take time.

In this planning process, other key factors to consider are what data or key performance indicators (KPIs) will be used to evaluate the effectiveness of the program. It can take 3 – 5 years to see a financial return on investment (ROI) from a workplace health program, and longer to see measurable group level changes in health-related risk factors (16,17). Overall, ROI for workplace wellness programs is approximately $1.50 for every dollar invested in the program; however, the type of program impacts ROI with programs targeting disease management returning $3.80 per dollar spent, but only $0.50 per dollar spent for lifestyle management programs (17). Therefore, when meeting with leadership, focusing on other processes related to KPIs (program engagement and enjoyment) and other business-related KPIs (absenteeism and presenteeism) will provide better justification for program continuation (17).

STEP 3. PROGRAM IMPLEMENTATION

After identifying potential strategies and initiatives, organizing the health program rollout using a master schedule or implementation timeline can help keep the program on track (Figure 1). Identifying potential barriers in the planning and implementation phase can help increase program reach and effectiveness. Common barriers during the implementation phase in public safety personnel may arise from particular demographics (e.g., males are typically more resistant to prevention screenings and health participation), shift

- **Leadership Support and Buy-In (Month 1)**
  - Shared vision and objectives
  - Allocation of resources (time and money)

- **Establish Health Team/Committee (Month 2)**
  - Engagement across the workplace
  - Champions who can promote/support the program

- **Assess Health of Workplace (Month 2-3)**
  - Organizational, individual, and environmental health
  - Employee interest/perceived needs

- **Organize and Plan the Program (Months 3-4)**
  - Focused/clear goals and Objectives
  - Develop action plan

- **Program Implementation and Evaluation (Months 4+)**
  - Variety of educational and hands-on sessions
  - Multiple health-related conditions
  - Continuous measurement and evaluation

FIGURE 1. PROGRAM IMPLEMENTATION TIMELINE

work (e.g., professional staff not available during night shift hours, off-shift time conflicts), and mistrust (e.g., perceived union or municipality repercussions) (9,10,12). Policy support to mitigate shift work barriers can be accomplished by providing employees with paid time to attend health programs and screenings during their shift or offering flexible scheduling options to accommodate different shifts (9,10,18,23). A good example of this is allowing stations to "clock out" for one hour per shift to focus on health (physical, mental, and nutritional), which has resulted in more than 70% of total workforce (police and fire) regularly utilizing services (7,8). Collaborating with unions to align health programs with employee needs can minimize perceived mistrust. Additionally,

budget constraints and cultural resistance may hinder program effectiveness; therefore, focusing on a sustainable long-term program with leadership and policy support can help mitigate these concerns regardless of barrier types.

STEP 4. PROGRAM EVALUATION

Continuous monitoring is necessary to measure program success and identify any necessary changes to programming. When evaluating the effectiveness of the program, it is important to focus on three key areas: 1) process, 2) outcome, and 3) impact (Table 3 provides examples of each).

TABLE 3. EXAMPLES OF PROCESS, OUTCOME, AND IMPACT MEASURES IN WORKPLACE HEALTH PROGRAMS

MEASURE TYPE	DEFINITION	EXAMPLE
Process	Measure the implementation and delivery of the workplace health program activities.	• Number of fitness training sessions attended or delivered each month • Percentage of employees participating in wellness seminars • Frequency of health and safety checks performed
Outcome	Measure the long-term effects or results of the workplace health program on the health of the employees.	• Reduction in injury rates or sick days • Improved physical fitness test results over time • Increase in employees passing health screenings
Impact	Measure the overall effects of the program and determine if the program is meeting the intended long-term outcome.	• How has job satisfaction changed or overall well-being? • What is the overall impact on the larger community (e.g., response times)? • Changes in healthcare costs for the company

TABLE 4. EXAMPLE OF CATEGORIES OF HEALTH AND PRODUCTIVITY MEASURES IN EMS PERSONNEL

CATEGORY	DEFINITION	EXAMPLE MEASUREMENTS
Health Risks and Healthy Behaviors	Factors and behaviors that influence the likelihood of developing health issues or conditions.	**Health Risks:** • High prevalence of obesity • High prevalence of smoking **Health Behaviors:** • Percentage of EMS personnel who regularly engage in physical activity • Percentage of EMS personnel who adhere to a balanced diet • Percentage of EMS personnel who practice smoking cessation
Clinical Measures and Health Care Costs	Clinical indicators and the associated financial expenses related to employee health care.	**Clinical Measures:** • Blood pressure • Cholesterol levels • Body Mass Index **Health Care Costs:** • Cost of treating work-related injuries • Cost of treating chronic conditions such as hypertension
Productivity Related Measures	Metrics that evaluate the impact of employee health on their work performance and overall productivity.	**Absenteeism:** • Number of sick days taken by EMS personnel due to illness or injury **Presenteeism:** • Instances where EMS personnel are present at work but are less productive due to health-related issues, such as fatigue or chronic pain

Outcomes should be aligned with the overall goals and objectives of the program while providing protection of individuals' health data. It is recommended to collect health risks and health behaviors, clinical measures and health care costs, and productivity related as part of the outcome and impact level evaluations (Table 4).

After data collection, it is important these results are shared with leadership in either dashboard or report form to support program justification. Leadership is often interested in ROI and value on investment (VOI). ROI is calculated by dividing savings benefits by program costs, while VOI is calculated by dividing program costs by program outcomes. These answer two important questions—1) ROI: how much am I saving by investing in the program? 2) VOI: how much does it cost per unit of outcome? However, it can take 3 – 5 years to see both ROI and VOI, so early and effective communication with leadership is necessary to set program expectations and definitions of success (20). In the short term (first 1 – 3 years), it may be better to focus on process, while collecting and analyzing outcome and impact data for later use to help establish the cost effectiveness of the health program. Additionally, the workplace health coordinator or committee should analyze the results for areas of improvement to help either revise goals of the program or make changes to future plans. For example, low attendance for monthly wellness educational sessions may result from low enjoyment or satisfaction, lack of awareness (poor program communication), or time constraints, all of which can be evaluated and adjusted with proper process-oriented evaluation measures.

SUMMARY
Investing in workplace health programs can help organizations improve physical and mental health, along with employee recruitment and retention. Workplace health programs that focus on all aspects of health and reach all employees can make substantial and lasting impacts within these communities. Workplace health programs should meet the needs of the employee and be properly planned, implemented, and evaluated for program success. Now is the time to take action: engage with employees and leadership to foster collaboration and gather valuable input. Start assessing your workplace's unique needs and priorities to ensure the program addresses the most relevant health and wellness challenges.

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