



About the Print Version

This print version of the module includes all the substantive content from each screen, except for the Check Your Understanding exercises and the final quiz. The workbook, which is referenced throughout the module, is available online.

Introduction

Workforce resiliency may be thought of as how effectively and quickly an individual or an organization responds to and recovers from an emergency or disaster. We tend to forget that there are many factors that begin long before a disaster that can affect how resilient we will be in the face of that disaster. In general, we fare better if we avoid a fire than if we must respond to a fire once it has broken out—by then, in many cases, most of the damage is already done. The saying goes that an ounce of prevention is worth a pound of cure, and nowhere is that more true than in disaster preparedness and workforce resiliency.



Connecting Preparedness to Resiliency

In general, the more prepared individuals and organizations are before a disaster, the more likely it is that both individuals and organizations will be able to demonstrate resiliency in the face of a disaster. By adequately preparing ourselves and our organizations, we greatly increase the likelihood that we will be able to continue to function both physically and emotionally during an emergency response. If we are prepared, we are also more likely to be able to offer critical services during the stressful times surrounding a disaster.

Coping

When faced with a stressful situation, organizations and individuals use a variety of different strategies to deal with the stress. These tactics are collectively known as coping strategies.

Coping strategies can take the shape of social, behavioral, cognitive, and/or emotional tactics. Positive coping strategies can help increase individual and organizational resiliency by reducing the effects of stress, ensuring a more effective response to an emergency. Ineffective coping strategies may lengthen or increase the effect of the stress, or may simply decrease the resiliency of the organization or individual.



You and your workplace may use a variety of individual coping strategies, or you may use a mix of some or all of them. In any case, as you move through the following review of various categories of coping strategies, take a moment to compare them with your own personal or your organization's coping responses to stressful situations. These categories of coping strategies are general descriptions and so there may be some overlap in the categories. That's okay, these categories can still be used to examine your own and your organization's behavior.

Approach Coping vs. Avoidance Coping

The first distinction in coping strategies is between approach coping and avoidance coping strategies. Approach coping is practiced by individuals or organizations who make plans, confront situations directly, and who focus on the positive, even in stressful situations.

Avoidance coping, on the other hand, is associated with social withdrawal, avoiding the problem or people associated with the problem, and avoiding confrontations. For individuals, avoidance coping may even involve avoiding one's feelings, which is known as emotional numbing. In organizations, avoidance coping may involve waiting too long to make decisions or letting ineffective employees remain in their positions rather than taking the trouble to remove or retrain them.

Approach coping is generally the more effective of these strategies. In fact, research done with firefighters has shown that those firefighters who rely on avoidance coping strategies seem to be at a greater risk for developing post-traumatic stress disorder. We are not sure if this effect occurs because there is something inherently detrimental about avoidance coping that undermines an individual's resiliency or whether the stress disorder occurs simply because the problems are never confronted.

We also do not know if this same decrease in resiliency would apply to organizations that practice avoidance coping, but the the standard joke on this page about dysfunctional organizations seems to ring true.

"There is no problem too big for dysfunctional organizations to ignore."

Adaptive Coping vs. Maladaptive Coping

Another way of looking at coping is as either adaptive or maladaptive. Adaptive coping is any action that protects or buffers us against stress and helps reduce tension. Examples of individuals using adaptive behavior may include problem solving or relaxing to reduce tension if there is no immediate solution to the stressful problem. Organizations may respond adaptively to stressors by engaging in preparations for a disaster, training disaster personnel, and developing an organizational disaster plan.



Maladaptive coping does not protect us or buffer the effects of stress and tension because it is characterized by behaviors that do not resolve the situation. An example of maladaptive coping in disaster preparedness for an organization may include failure to develop a plan for continuity of operations in the event of a major disaster such as a pandemic. For an individual, maladaptive coping may include ignoring rather than treating the effects of stress on the body such as increased blood pressure, leaving the individual less able to respond in case of a disaster.

Thankfully, adaptive coping is common in most people and organizations. Maladaptive coping seems to be the exception rather than the rule.

Problem-focused Coping vs. Emotion-focused Coping

There are also differences between problem-focused coping and emotion-focused coping strategies. Problem-focused coping is practiced by individuals and organizations who try to define the problem that is causing the stress, who address the root cause(s) of the problem, and who then try to resolve that problem.

In contrast, emotion-focused coping typically involves some type of emotional discharge such as yelling, crying, venting, or ranting. Although letting off steam can be helpful and make us feel better in the short-term, emotion-focused coping does not actually address the causes of stress and so isn't likely to help resolve or decrease the stressful situation in the long-term. Emotion-focused reactions in an organization include increased blaming of employees for difficulties, internal conflict, chaotic and impulsive decision making, or a failure to make timely decisions.



See Exercise 1 in the Workbook to identify your current individual and organizational coping strategies.

Stressor Appraisal and Self-Talk

Two factors that affect our ability to cope are how we look at stressors (stressor appraisal) and how we label our stressful experiences (self-talk). If you were to find yourself in a raft floating towards some whitewater rapids, you would react physically to the knowledge of those rapids. Your heart would be racing, your adrenaline would be pumping, and you might be perspiring.

But, if we just examined your physiological response, we wouldn't know if you were excited or frightened. Your mental and physical experience of those rapids is going to be very different depending on how you categorize those physical responses. If you describe your reactions as "excited," your experience and behaviors will be very different than if you labeled them as "afraid."

Research on self-talk in paramedics has found distinct physiologic differences related to the language paramedics used to label their job tasks. If they described their occupation as a "challenge,"



paramedics actually had lower blood pressure readings compared to those paramedics who labeled their occupation as a “stressor.”

The choice of language may not actually change the situation but it can certainly affect our perception and experience of stress. Reminding yourself that you can handle stressful situations can be a helpful strategy in increasing resiliency and coping with all kinds of stressful situations.

Organizations and their leaders can also take advantage of the the use of self-talk. Good leaders know how to choose terms or phrases that will inspire their employees to rise to the occasion, such as describing a situation as “a difficult period requiring sacrifice.” This is much more helpful than labels, such as calling the same situation impossible, which may lead to systemic demoralization and giving up.

The Downside of Self-Talk

Unfortunately, certain kinds of self-talk can also have negative effects on coping and resiliency. Some people always assume the worst and label all situations as catastrophes. On an organizational level, some organizations respond to every stressful event as if it were a full-blown emergency. In those cases, even if the stressful situation isn’t actually too stressful, the perception of stress is increased for the individual and for the organization.

Labeling each event as a catastrophe can also be contagious. Not only does every event seem terrible, someone with that increased perception of stress or danger may be more likely to spread their fear to others. Individual or organizational catastrophizing might play out in financial busts such as the panic in stock market crashes or in a real estate market meltdown.

On the other end of the continuum, minimizing any stress and the possible dangers of a stressful situation can also be problematic, especially when real hazards are downplayed or ignored.

Maintaining Positive Illusions

Sometimes, the self-talk we use is not an accurate representation of reality, but bending the truth a little bit for ourselves may be a good thing. These helpful self-deceptions are known as positive illusions. One example of a common positive illusion occurs in people getting married. About 50% of marriages fail within the first five years so, although most people say that their marriage will be different, statistically whether it ends in divorce or not is no more likely than the results of a coin flip. Without that positive illusion though, not nearly as many marriages (including the happy ones) would take place.

Research has been done on the helpfulness of positive illusions in cancer survivors. If you ask cancer survivors who have had a radical mastectomy

if they think that they are doing better than average, 95% will say they are. Mathematically, no more than 50% can be doing better than average so about 45% of these people must have some degree of positive illusion. Researchers have found that those 5% of cancer survivors who do not feel they are doing better than most are at risk of having adverse outcomes including death. So, there may be something beneficial about kidding yourself a bit (a positive illusion) and feeling that you're doing better than average. In this case, it may be the difference between life and death.

These positive illusions can also help organizations achieve their goals. For example, during World War II, President Roosevelt declared that the United States would build 50,000 planes in the next four years. Everyone thought it was impossible as we had not constructed 50,000 planes in the previous ten years combined. However, the workers bought into the illusion and it turned out to be real as workers managed to build 100,000 planes. By creating the positive illusion, the president inspired workers to work harder, to explore new technologies, and to meet the goal.



Organizational Preparedness

Organizations must not only be aware of and choose appropriate coping styles, they also must incorporate psychological preparedness in their training, planning, and preparation for disasters. Organizational responsibility doesn't stop with logistics and planning. The organization also has a duty to tell worker what they can expect to feel during a disaster.

Disaster workers and responders need to know that it is normal to feel some anxiety and distress during a response. Workers can then evaluate their own feelings, and disaster responders will also better know how to evaluate emotional reactions in others. Common responses to disasters include physical symptoms such as heart palpitations, chest pain, and dizziness. These symptoms are normal. However, if they persist for more than a week after the disaster response, they may indicate a problem that requires medical attention. If strong emotional symptoms persist for several weeks after the disaster, then they may indicate a problem that requires mental health support.

See [this information](#) sheet from the National Institute for Occupational Safety and Health to explore the most common physical and emotional responses to a disaster.

www.cdc.gov/niosh/unp-trinstrs.html

Organizations can also take advantage of other strategies for familiarizing their workers with what to expect in a disaster. Training, practice exercises, tabletop exercises, and even lessons learned reporting can all increase the resiliency of the organization by preparing its employees for what they will face. In this module, you will learn about the different methods for increasing

resiliency, but each one may require additional training to implement in your organizations. Additional resources for each of these methods are available in the Toolkit that accompanies this module.

Training

One of the most effective ways to increase knowledge and resiliency is to train employees. In one study conducted with firefighters in the City of Tacoma Fire Department, researchers found that first responder training by the Department of Defense had significant positive effects.

First, the firefighters' baseline knowledge of chemical, biological, radiologic, nuclear, and explosive hazards was measured before their preparedness training. Firefighters who participated in the intensive series of workshops showed significant improvement in their knowledge. This increased knowledge was maintained for at least four months following the training. The participating firefighters also showed increased confidence in their ability to respond to these types of hazards in their community, at least in part because they had more knowledge and a better understanding of how to respond to these kinds of hazards.

Preparedness training is also important because it helps organizations cross-train workers in different roles. Cross-training is important so that, during a disaster, there isn't just one person in an organization or unit able to perform a specific role. During some disasters, such as a pandemic, some people may not be available to perform their function or critical role and so another person may have to step in. For organizations that must be able to provide services during a disaster, cross-training is an important part of ensuring that they are prepared and ready to meet that potential disaster.

Tabletop Exercises

Tabletop exercises usually involve gathering a number of parties who are interested in a particular scenario or possible disaster and talking through the response plan. The goals of a tabletop discussion are:

- Increased education. All participants should leave with a better understanding of the potential dangers as well as the plans and policies that are already in place.
- Identification of the gaps in the current plans. Common gaps include plans for incorporating volunteers into disaster responses as well as plans for a comprehensive and long-term mental health response.
- Strengthened relationships between responding agencies. As a result of



sharing plans and concerns and developing a shared response scenario, relationships and coordination efforts among agencies are often improved.

The Toolkit includes links to available trainings from FEMA and others on how to create tabletop exercises.

Functional Exercises

An additional tool that organizations can use to prepare for a disaster is a functional practice exercise. One good illustration of the value of practice comes from a comparison of two practice exercises conducted by the public health agencies in Washington State, one in 2002 (Washington State Department of Health) and one in 2005 (Public Health-Seattle & King County). Both exercises used the scenario of an anthrax attack in the community with a large number of exposed individuals who needed mass dispensation of antibiotics.

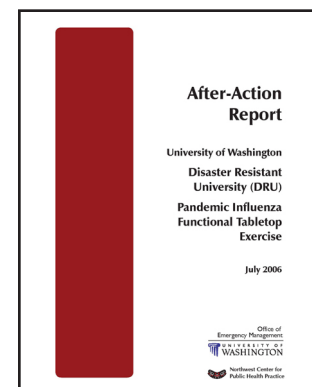
In the 2002 exercise, it took 40 minutes for patients to go through the line, receive their medications, and exit the building. Based on the lessons learned from that first exercise, dramatic improvements were made in 2005, decreasing the time required for the process to 12 minutes per patient. Changes included signage in additional languages and more volunteer involvement. Taken together, these changes could save the lives of hundreds or thousands of people, but the organizations involved would never have known that these changes were necessary without the practice exercises.

On average, participants who participated in the exercise expressed increased confidence that they could respond to such a hazard in their own community. For any organization that knows of specific tasks that would be difficult in a disaster, a practice exercise can help the organization work out the kinks and increase the confidence of its workers before the situation becomes critical in a disaster.

Lessons Learned

Learning lessons from past exercises and disasters involves several steps:

- The easy steps:
 - Collecting the lesson.
 - Validating and verifying the accuracy of the lessons.
 - Storing the lessons for easy retrieval (often in a database, journal, or internal document).
- The more difficult steps:
 - Disseminating the lessons to others who may be able to learn from them.



- Using the lessons to develop your plan of action in a future disaster.

You can learn from the experiences of others by searching the web for specific Lessons Learned documents or After Action Reports. Some of these are created specifically for training by the federal government, humanitarian relief organizations, or local businesses and schools, and may be available online. Consider the difficulties and suggested solutions and how they may apply to your disaster response planning.

One example of a source of After Action Reports comes from a series of preparedness exercises, called TOPOFF exercises, used by the federal government for private and public sector officials and responders. These exercises attempted to simulate real-world, multi-faceted threats and emergencies so that participants could practice coordinating responses, making decisions, and working with other organizations in real-time. After Action Reports were developed for each of these exercises in the series, including simulated chemical, biological, and radiological attacks on a variety of locations. These reports are available to any organization to help refine disaster response planning and procedures.

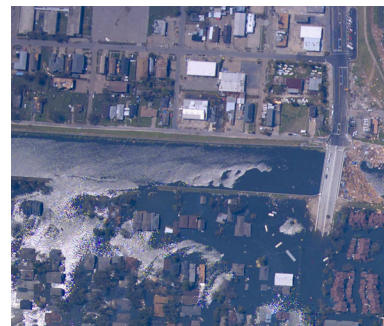
Check out the Toolkit for links to specific Lessons Learned databases, including more information about each of the TOPOFF exercises.

Hurricane Katrina Examples

To illustrate some lessons learned, let's explore the disaster response to Hurricane Katrina as documented in the article entitled "Twelve Katrina Response Failures." In this article, several specific problems were detailed in the hopes of avoiding those mistakes during the next major storm.

For example, one problem was inefficient communication between responders during the response. One example of this difficulty was the fact that several helicopters that passed overhead after Hurricane Katrina reached land reported that the levies were being breached. But because this report of broken levies wasn't verified, the information was not passed on to FEMA and the Homeland Security Department for another eight hours until the report could be verified by personnel on the ground. This delay likely increased the amount of damage from flooding.

A second lesson learned from Katrina had to do with rumors and chaos. Research has shown that, in general, if timely and accurate crisis information is not provided, rumor and chaos will fill that void. During Katrina, limited information was available about what kinds of help were available for survivors, and so inaccurate and exaggerated reports about the federal response circulated through the affected cities. Providing timely, accurate, credible crisis informa-



tion is an important function in disaster response, or inaccurate information may come from elsewhere.

The goal is not to find fault with the hard-working responders from Hurricane Katrina, but to learn from their experiences. Some changes are easier to incorporate, such as increased emergency training standards, but lessons learned provide a wealth of information for any organization hoping to preserve function and resiliency during a disaster response.

Personal Resiliency and DREAM Stress Management Components

Personal resiliency is important for individuals and for their work teams. Organizations should not overlook individual stress management strategies when they focus on preparedness and resiliency as the individual response can have a large impact on the organization's ability to respond.

One common way of describing effective stress management strategies is through DREAM: Diet, Relaxation (including sleep), Exercise, Attitude, and Motivation.

Diet

A healthy diet can help you maintain a healthy weight and to feel your best. Getting enough fiber, whole grains, protein, fruits, and vegetables every day can help your body combat the effects of stress and maintain resiliency during a disaster. As the CDC recognizes overweight and obesity in America as the second largest public health problem only after cigarette/nicotine addiction, the importance of identifying steps to keep from becoming part of that epidemic is clear.



Working fruits and vegetables into your diet more regularly can help, as can switching out high calorie or high sugar drinks for water. Trying to maintain smaller portions, eating more slowly, avoiding fast food, or even deciding before you sit down how much you are going to eat can also help maintain your health. Each step that you take can improve your health and ability to respond and cope during a disaster.

Relaxation

Another key to preparing yourself to respond well to stress is taking time to relax every day. People would likely benefit from building in mindfulness and meditation twice a day for twenty minutes, but most of us just don't have the time. Instead, try the following ten-second exercise called the quieting

response, something that you can do on the run and that you can repeat throughout the day.

Transcript: This is a brief relaxation exercise termed the “Quieting Response” — once mastered it only requires 10 seconds to take a mini-break.

First, position yourself comfortably in your chair and put both of your feet on the ground. Imagine a stressor or an irritant and make the conscious choice to smile.

Next, take two deep abdominal breaths. If you don’t have time to take two breaths, then just take one.

Now, check to see if your teeth are touching. If they are, you have more tension in your jaw than you need. Release that jaw tension. Now, encourage feelings of warmth in your hands and feet. Finally, repeat a calming sentence to yourself — like “Now relax.”



This ten-second micro-break can help you un-stress on the run. Just smile, take a couple of breaths, release the tension in your jaw, encourage feelings of warmth, and remind yourself to relax.

Sleep as Part of Relaxation

An often-overlooked part of relaxation is sleep. One way to measure sleep deprivation is to track how long it takes people to fall asleep in a quiet, dimly lit room when seated on a recliner—for many Americans, it takes only a few minutes, indicating a high level of sleep deprivation. In general, people experience sleep deprivation if they do not wake up automatically and have not experienced sufficient restorative sleep time.

We, as Americans, might be one of the most sleep-deprived peoples on the planet. This sleep deprivation manifests in a variety of performance and health measures. Different motor and cognitive tasks can show differences in ability and reaction time due to sleep deprivation. Also, over time, the negative health effects can be documented in the cardiovascular and gastrointestinal systems.

Some research suggests that total sleep time in a 24-hour period (including sleep and nap time together) may be what we need to focus on to prevent sleep deprivation. The most important measurement in terms of performance and health measures is the combination of these two units.

Short naps may help improve performance and health. Researchers for the Air Force believed that naps needed to be at least 30 to 90 minutes long. However, newer research shows benefits from one or more 15-minute naps. These naps, added to nightly sleep, contribute to your total sleep time and therefore increase performance and health.

What is also striking about this research is that just a 15-minute sleep debt

repeated for several days starts to impair your performance. So, if you're just missing out on 15 minutes of sleep that you need every night, by Thursday or Friday you're already showing significant decreases in performance measures. These difficulties in performance are especially relevant for emergency responders and public health personnel who are required to work long or irregular shifts.

The findings from a joint report by the US Fire Administration and the International Association of Fire Chiefs provide insight into the effects of sleep deprivation as a health and safety issue, as well as tips for mediating those dangers. You can access the full report from the Toolkit.

Exercise

As more research is done on exercise, the benefits and protections of exercise become more and more clear. New research confirms the benefits of exercise on mental health, a critical component of resiliency and stress management. Exercise has been shown to be as effective as prescription antidepressant in studies of depressed patients. Exercise didn't work as quickly as the antidepressant intervention, but it had the same outcomes as the pills. After two to three months, joggers showed the same mood benefits as those taking the antidepressant.

Obviously, exercise also has benefits in terms of weight control. Exercise burns calories and helps you maintain a healthy lifestyle. Benefits of exercise include reducing blood pressure, preventing heart problems, and mediating other health issues that can prevent you from responding in an emergency and simply coping with everyday life.



Exercise and Resiliency

Regular exercise also can help you achieve increased strength and stamina for daily living. Exercise becomes more important as you age, especially in terms of cardiovascular health.

In 1999, researchers discovered that we can actually increase the number of new brain cells through exercise. As one of the researchers who studied this phenomenon in mice said, it was as if their brain had been hooked up to a pedometer in that the more revolutions the mice made on the available running wheel, the more nerve cell growth there was. This suggests that exercise may be critically important in maintaining brain function.

Other research with stress symptoms also supports the importance of exercise. In a study of burnout, or a state characterized by emotional exhaustion, cynicism, and decreased effectiveness at work, firefighters were asked to agree or disagree with statements like, "I feel emotionally exhausted at the end of



the day,” “I get headaches,” or “I feel fatigued.” These symptoms are normally associated with burnout in firefighters.

Researchers examined frequency of exercise, the ages of the firefighters, and their symptoms of burnout. A few of the findings included:

- Firefighters in their twenties who didn’t exercise at all had very high rates of burnout symptoms.
- Firefighters in the same age group who exercised only one or two times a week experienced almost as many benefits, in terms of reduced burnout symptoms, as those who exercised three or more times a week.
- The sedentary group across all age groups experienced the most burnout symptoms.
- Benefits in terms of burnout symptoms occur when you only exercise one to two days a week. Sometimes people are put off by the idea that they’ll have to exercise every day or most days but most of the benefits of exercise in terms of deterring burnout come with one to two days a week.
- Those who exercised three or more days a week benefited the most. Firefighters in their fifties who exercised three days a week or more had more or less the same burnout scores as those firefighters in their twenties who exercised three or more days a week.

Attitude

Although there are many things in organizations and in other people that we can’t control, we do have control over our attitudes. Reframing our experience and the experience of our organizations can help us to have a positive attitude, which contributes to our ability to respond and recover effectively in a disaster.

Here are a few tips:

- Preparedness is a new role to most public health agencies. Do your best to embrace it and the new challenges and experiences it brings.
- Appreciate the importance of planning, training, and exercising.
- Decide to define stressors as challenges you can cope with, especially in the midst of an emergency response.
- Maintain a sense of humor. Research indicates that things often do not go well with those firefighters or disaster personnel who have lost their sense of humor.



Motivation

The final component of the DREAM acronym is motivation, which is also a key component of managing your stress. The feeling that your work is important, that your work really makes a difference, is key to how resilient you are when a disaster hits.

There's no doubt about the fact that, in terms of disaster response, your family and your community are counting on you. That can be daunting, but it can also increase your motivation level. Think of how you feel when you know that your agency and your community are counting on you. Are you more motivated to do the best you are capable of?

Summary

In this module, we've explored the concept of coping styles, as well as ways to increase both your personal and organizational preparedness and resiliency. If you can learn to prepare yourself and your organization for the stressors and challenges you will face during a disaster, you will be able to respond more effectively for longer periods of time and with increased resiliency to whatever difficulties come your way.

See Exercise 2 in the Workbook to identify ways that you can use the DREAM components to help you change your own behaviors.