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In February of 2003 the United States Department of Homeland Security released Ready.gov, an emergency preparedness web resource for Americans, as a cornerstone of its multi-million dollar Ready Campaign. According to a press release, the site has received more than 1.9 billion hits and 23 million unique visitors as of March 2006 (DHS, 2006, para. 6). Unfortunately for these visitors, Ready.gov contains information that is both inaccurate and incomplete. Despite the fact that the Department of Homeland Security has been alerted both publicly and privately of this problem, the modifications that have been made to the site over the past three years, including an update in July 2006, have not adequately addressed the errors. A thorough investigation and analysis of Ready.gov by the Federation of American Scientists reveals that numerous shortcomings remain, leading to the development and implementation of an alternative web resource with comprehensive and correct information. This resource aims to be a technological means to affect policy and compel the Department of Homeland Security to meticulously evaluate Ready.gov and eliminate mistakes, in order to provide useful information for a concerned public.

Background

The Department of Homeland Security (DHS) identifies Ready.gov as a “common sense framework designed to launch a process of learning about citizen preparedness” (DHS, n.d.-c, p.11). This framework caters to three different groups of the population, providing information for individuals and families in a section called Ready America, for business owners in Ready Business, and for children in Ready Kids. Ready America and Ready Kids break preparation down to three basic steps: “get a kit,” “make a plan,” and “be informed,” with instructions ranging from how much water each person in your family needs per day to the definition of a

biological threat (DHS, 2003r). Ready Business informs business owners that preparing involves “plan[ning] to stay in business,” “talk[ing] to your people,” and “protect[ing] your investment,” with information about continuity planning, creating a crisis communication strategy, and how to prepare for utility disruptions, among other things (DHS, 2003s).

With this information, Ready.gov seeks to provide useful guidance for individuals and businesses looking to prepare for and respond to terrorist attacks and natural emergencies. Davis, LaTourrette, Mosher, Dais, and Howell (2003) of the RAND Corporation have established that there is significant need for such guidelines, since terrorist attacks could “create conditions that can be extremely dangerous,... the effects of such weapons are unfamiliar to most people and... the recent heightened concern over terrorism has spurred demands for individual guidance for attacks involving chemical, radiological, nuclear, and biological weapons” (p. xiii). This indicates that the clarity and accuracy of the facts presented in preparedness guides is of utmost importance.

The Ready.gov terms of use policy, however, states “we are not responsible if information that we make available on this site is not accurate, complete or current...we have no obligation to update any information on this site” (DHS, 2003v, para. 5). This legalese effectively protects the DHS from the acts and choices an individual makes based on the information on Ready.gov. Unfortunately, it fails to provide incentive for the modification of inaccurate information.

This kind of policy should not be in place for a web resource devoted to the education of millions of people, especially when some may one day depend on the information for survival. This would not be an issue if most or all of the material found on Ready.gov was reliable;

however, this is not the case as Davis et al. (2003) and others have noted. The following page-by-page analysis delineates what is inaccurate and incomplete on Ready.gov.

Evaluation Criteria

Four evaluation criteria form the foundation for the analysis. Most importantly, the accuracy of the material on each page must be taken into consideration. A second criterion is the completeness of the information; a preparedness plan cannot work effectively without all of the pieces in place. Comprehensibility is a third condition that must be taken into account, since people from a variety of backgrounds and situations refer to the instructions and advice provided. Finally, the applicability of the material presented must be evaluated, as useless, wordy, or repetitious information could hinder decision-making and response in an emergency.

Analysis

Careful consideration of the aforementioned criteria on every page of Ready.gov led to the discovery of several common problems. These problems include generic advice, unnecessarily lengthy descriptions, and verbatim repetition of details on multiple pages, all encapsulated within a confusing navigational structure. Davis et al. (2003) have agreed that most of the recommendations provided by the Ready campaign guidelines are not applicable to specific situations or scenarios, and are instead too generic to be useful (p. 67). For example, “Deciding to Stay or Go” instructs: “There are other circumstances when staying put and creating a barrier between yourself and potentially contaminated air outside, a process known as ‘sealing the room,’ is a matter of survival. Use available information to assess the situation” (DHS, 2003h, para. 4) (see Figure 1 of the appendix).

There is limited value to these instructions since they give no definitive explanation of situations when creating a barrier between yourself and contaminated air would be the best decision. For example, “sheltering in place” is not effective for nuclear or indoor chemical attacks, as Davis et al. (2003) have described (p. 67). The public have no way to know this based on the information above and would have a hard time making an informed decision at a critical moment. It would be simple to include a short list of times it is appropriate to seal a room.

Unnecessarily lengthy descriptions and instructions are another hindrance to the informed decision-making required in every emergency situation. Nielsen and Fox (2006) have noted that “web content should have [fifty percent] of the word count of its paper equivalent”. In addition, “[the information presented on Ready.gov] is important stuff that should be presented directly,” according to Susan K. Neely, a former Assistant Director of Homeland Security and supervisor of the Ready project (as quoted in Patton, 2003, para. 5). Nonetheless, it is difficult to find information within the pages of Ready.gov; for example, there are seventeen unique pages in Ready America devoted to overview, getting a kit, and making a plan. These could easily be condensed into one or two pages by removing rhetoric and nonessential words, as the following example using Ready.gov’s “Clean Air” page demonstrates (see Figure 2 of the appendix):

Face masks or dense-weave cotton material, that snugly covers your nose and mouth and is specifically fit for each member of the family. Do whatever you can to make the best fit possible for children.

Be prepared to improvise with what you have on hand to protect your nose, mouth, eyes and cuts in your skin. Anything that fits snugly over your nose and mouth, including any dense-weave cotton material, can help filter contaminants in an emergency. It is very important that most of the air you breathe comes through the mask or cloth, not around it. Do whatever you can to make the best fit possible for children. There are also a variety of face masks readily available in hardware stores that are rated based on how small a particle they can filter in an industrial setting.

Given the different types of attacks that could occur, there is not one solution for masking. For instance, simple cloth face masks can filter some of the airborne "junk" or

germs you might breathe into your body, but will probably not protect you from chemical gases. Still, something over your nose and mouth in an emergency is better than nothing. Limiting how much "junk" gets into your body may impact whether or not you get sick or develop disease. (DHS, 2003g)

After one or two lines, it becomes difficult to focus on and remember the information shown above, especially when reading it from a computer screen. Below is the same information, modified for the internet.

- Snugly cover your nose and mouth with a face mask, available in any hardware store¹
- Make the best fit possible for both children and adults to ensure that air comes through the mask or cloth and not around it
- It is also important to protect your eyes and cuts in your skin
- You may need to improvise with anything that fits your face snugly, such as dense-weave cotton material
- Something over your nose and mouth in an emergency is better than nothing

This format is easier to skim and easier to remember.

In addition to wordy explanations, multiple pages contain the same information verbatim (see Figure 3 of the appendix). This practice is frustrating and may turn away users who do not have time to re-read entire sections they have already seen. This repetition, combined with a site layout and navigation that is confusing (see Figure 4 of the appendix) makes it nearly impossible to determine where to look and in what order.

An examination of all of the pages of Ready.gov indicates that all of the issues described thus far are common across many of them. The "Be Informed" section of Ready America, which includes five subcategories: Biological Threat, Chemical Threat, Explosions, Nuclear Blast, and Natural Disasters, has many specific examples of these problems as well as several inaccuracies.

Biological Threat and Influenza Pandemic

Ready.gov defines a biological threat as “the deliberate release of germs or other biological substances that can make you sick” (DHS, 2003c, para. 1). Though the Centers for Disease Control (2006a) have agreed with this explanation, there is information contained within it that is inaccurate, ambiguous, and unnecessarily lengthy. For example, there are three paragraphs in “Biological Threat: Overview” (see Figure 5a of the appendix) that could easily be condensed to two or three bullet points, making the information easier to read and understand as described above. In addition, the material following these paragraphs in the overview is repeated verbatim in subsequent sections (DHS, 2003c).

Along with repetitious information, “Biological Threat” includes instinctive advice that is unnecessary, such as “if a family member becomes sick, it is important to be suspicious” (DHS, 2003c, “During a declared biological emergency” section) or “use common sense to determine if there is immediate danger” (DHS, 2003d, “Use common sense” section). There is also an entire page devoted to symptoms and hygiene (see Figure 5b of the appendix), which warns, “If a family member develops any of the symptoms below, keep them separated from others if possible...” (DHS, 2003e, para. 1). The symptoms include headache, sore throat, cough, and other indicators of the common cold. This information, meant to be helpful, could act instead to “stir up more anxiety than it quells,” as Zimbardo and Kluger have noted about the whole of Ready.gov (p. 1).

Finally, directly beneath the header for “Biological Threat” lies a link to details about pandemic flu (see Figure 5c of the appendix), implying that pandemic flu is a form of biological threat. The Department of Health and Human Services (2006) disagrees, characterizing pandemic flu as “a global disease outbreak...[which] occurs when a new influenza virus emerges for which people have little or no immunity” (para. 1). Even if Ready.gov recognized “Influenza

Pandemic” as a natural occurrence, there is still limited information about a possible outbreak (DHS, 2003l). The details that are available do not answer questions or address concerns, even though recent media coverage has attention focused on the issue. There should at least be specific details about how to respond, including answers to questions like: “Should you expect to stay at home?,” “Should you go out and purchase masks?,” and “Is a vaccine available?”.

The information that the Department of Homeland Security does afford site visitors about pandemic influenza is not constructive (see Figure 5d of the appendix) . Phrases like “the federal government, states, communities, and industry are taking steps to prepare for and respond to an influenza pandemic” (DHS, 2003l, para. 1) do not describe a pandemic flu and how an individual or business can act to prepare for it.

Chemical Threat

Ready.gov defines a chemical threat as “the deliberate release of a toxic gas, liquid or solid that can poison people and the environment” (DHS, 2003f, para. 1). Davis et al. (2003) have agreed with this definition but have pointed out palpable inaccuracies in the recommendations that follow it. This includes the following advice, which is incorrect: “If you can't get out of the building [under chemical attack] or find clean air without passing through the area where you see signs of a chemical attack, it may be better to move as far away as possible and ‘shelter-in-place,’” (DHS, 2003f, “If You See Signs of Chemical Attack” section) (see Figure 6 of the appendix). Davis et al. (2003) have explained, “This response... is appropriate for outdoor chemical attacks but not for chemical attacks inside” since sealing a room and “sheltering-in-place” could cause an individual to become trapped inside with poisonous chemicals (p. 67).

Other advice in this section is misleading, including counsel that “many sick or dead birds, fish or small animals are also cause for suspicion” (DHS, 2003f, “Possible Signs of Chemical Threat” section). This guidance could cause needless alarm, since it is not uncommon to see a dead animal. The next step, according to the page, is to “quickly try to define the impacted area or where the chemical is coming from, if possible” (DHS, 2003f, “If You See Signs of Chemical Attack” section). This is confusing advice that undermines the urgency in responding to a chemical attack (see Figure 6 of the appendix). It is not essential to “define the impacted area” when the crucial key to survival is only to find clean air as quickly as possible.

Ready.gov does effectively emphasize that finding clean air quickly is essential, but its suggestions for how to do so are puzzling. “If you are outside, quickly decide what is the fastest way to find clean air. Consider if you can get out of the area or if you should go inside the closest building and ‘shelter-in-place’” (DHS, 2003f, “If You See Signs of Chemical Attack” section) is advice that is both confusing and inaccurate (see Figure 6 of the appendix). Davis et al. (2003) have asserted that attempting to get away from a chemical cloud could take an individual into harm’s way, since it may be impossible to determine the direction the cloud is moving (p. 28).

Explosions and Nuclear Blast

Fortunately, Ready.gov’s information about explosions is useful and accurate, since the most common form of terrorist attack is a conventional explosive (CDC, 2006c). Information about nuclear blasts is not as practical. Orient (2005) has asserted, “It is as if billions of dollars worth of research on nuclear weapons effects and civil defense had never been done” (para. 1). Ready.gov instructs concerned citizens to “Take cover immediately, as far below ground as possible, though any shield or shelter will help protect you from the immediate effects of the

blast and the pressure wave” (DHS, 2003o, para. 2) (see Figure 7a of the appendix). Davis et al. (2003) have noted, “This is misleading, because an individual is unlikely to have sufficient time to make such a step effective. Such guidance seems to be a holdover from earlier Cold War nuclear scenarios in which up to 30 minutes of warning was expected” (p. 67). Davis et al. (2003) have also contended that “the Ready campaign guidelines do not indicate the time urgency involved and leave it to an individual to ‘consider if you can get out of the area; or if it would be better to go inside a building and follow your plan to “shelter-in-place”” (p. 68).

The visual guide for nuclear attacks also understates the effects of a nuclear bomb (see Figure 7b of the appendix). A graphic depicts “you are here” next to a nuclear blast, and recommends running around the corner (DHS, 2003o). The Office of Technology Assessment (1979) has indicated that even a relatively small bomb, like one a terrorist would use, could have a radius of destruction greater than one mile (p. 45). Finally, the first piece of advice given in the Ready.gov guidelines instructs “quickly assess the situation” (DHS, 2003o, “If there is no warning” section) (see Figure 7a of the appendix). This advice could be replaced by more a more useful recommendation, since an individual who sees a mile or more of their downtown disappear will automatically assess their surroundings.

Radiation Threat

In case of a radiological attack, Ready.gov recommends, “If you are already inside check to see if your building has been damaged. If your building is stable, stay where you are” (DHS, 2003q, “If There is a Radiation Threat” section) (see Figure 8 of the appendix) . Later on the same page, Ready.gov instructs citizens to “think about shielding, distance, and time” (DHS, 2003q, “If There is a Radiation Threat” section), where the farther away from the blast you are,

the lower your exposure. This advice is contradictory and, according to Davis et al. (2003), based on emergency response for laboratories handling radioactive materials (p. 68). In an attack situation, the most important thing to do is to avoid radioactive dust, as the Centers for Disease Control and Prevention (2006b) have recommended.

Natural Disasters

Ready.gov also offers guidelines addressing preparing for and responding to natural disasters. Like many of the other pages on the site, this information is needlessly verbose, offering three paragraphs of text (DHS, 2003n) when it could be condensed to, “Find out what disasters are common or possible in your area and prepare to respond to them” (see Figure 9 of the appendix). Links to Federal Emergency Management Agency (FEMA) webpages for different kinds of natural disasters accompany this information, including earthquakes, floods, tornadoes, and tsunamis. These links offer helpful, yet detailed, material (FEMA, 2006a). A brief summary of each kind of disaster would be useful on Ready.gov, with links to additional information for interested individuals.

Special Needs Items

An examination of every page on Ready.gov reveals that most are tedious to read yet include an adequate amount of information. An exception is the “Special Needs Items” page in Ready America. This page contains information for families with infants, the elderly, and people with disabilities; however, from this material individuals with disabilities would not be able to determine how to sufficiently prepare for an emergency. There are only twenty-one lines of information describing how to prepare for an emergency if you are disabled (DHS, 2003u) (see Figure 10a of the appendix).

The National Organization on Disability (2004) has reported, “More than two years after terrorist attacks focused national attention on the importance of planning ahead for disasters, Americans with disabilities remain insufficiently prepared, and are anxious about their safety” (para. 1). “Special Needs Items” lists several generic planning steps and various items to add to a supply kit. Questions arise such as “How do you plan to evacuate a multi-story building in an emergency if you have a mobility disability?” and “How will you know to evacuate a building if you are unable to hear an alarm?” Questions like these are legitimate concerns easily addressed by simple planning, yet Ready.gov does not attend to them. In fact, the same amount of information available for preparing your pet for an emergency is available for preparing yourself and your family if you have a disability (see Figure 10b of the appendix).

Specific information, including how to create a support network to help in an emergency or what special considerations to make when developing evacuation plans, is necessary for adequate preparation. Unique instructions on how to respond to different kinds of emergencies, for example what to do during an earthquake if you are confined to a wheelchair and cannot get under a sturdy piece of furniture, would also provide useful information.

The Department of Homeland Security has made invalid claims that this kind of detailed information is accessible on Ready.gov. In a 2004 press release, DHS announced that “Ready.gov, the Department of Homeland Security’s citizen preparedness web site, includes new and updated information to help people with disabilities prepare for and respond to emergencies of all kinds” (para. 12). This is a misleading claim, as an examination of a 2003 archive of Ready.gov indicates. The only “new and updated information” related to individuals with disabilities is a single link at the bottom of the “Special Needs Items” page (comparison of DHS (2003u) with Internet Archive (2003)). This link, in addition to three others, does not go to a

genuinely useful resource for individuals with disabilities. The only link that may offer valuable information, a Federal Emergency Management Agency (FEMA) site titled “Disaster preparedness for people with disabilities”, does not work and is difficult to find with a simple search.

It is important to ensure that equivalent information is available for individuals with disabilities for a variety of reasons. 19.3 percent of the American population over the age of five has a disability according to the National Organization on Disability (2005a). This accounts for one-fifth of the United States population, over fifty-four million people (DHS, 2005a). If this is not reason enough to ensure that there is adequate preparedness information available for individuals with disabilities, it is also the law. The Americans with Disabilities Act of 1990 (ADA) requires that federal, state, and local governments make emergency preparedness and response programs accessible to individuals with disabilities. An Executive Order enacted in July 2004, Individuals with Disabilities in Emergency Preparedness, also mandates that Federal departments and agencies consider the unique needs of individuals with disabilities in their emergency planning (Bush, 2004). The National Council on Disability (2005) has asserted that “if planning does not embrace the value that everyone should survive, they will not” (p. 4). It is extremely important that people with disabilities be considered in emergency preparedness plans.

Recent Updates

On July 17, 2006, the Department of Homeland Security issued a press release announcing that it had updated Ready.gov with “special preparedness information for pet owners, senior citizens, and individuals with disabilities and special needs,” as well as increased state and local information (DHS, 2006i). Additional analysis and word-by-word comparison

between the site that formed the basis for this investigation and the updated site found constructive, but not sufficient, changes.

There is now valuable information for seniors and pet owners, a beneficial change from the few details previously available (DHS, 2006h; DHS, 2006g). The state and local information is more comprehensive, which is good news since familiarity with community response plans is essential to preparedness (DHS, 2006c). The addition of summaries of information on preparedness and response for twelve natural disasters settles the main issue with the “Natural Disasters” section (DHS, 2006a). Influenza pandemic has also moved to its own section in “Be Informed” and changes to color and layout have made the site significantly easier to navigate (see Figure 11a of the appendix). However, there are still several problems.

The DHS has claimed that the information for individuals with disabilities is revised, but a word-by-word comparison between the updated version and the “Special Needs Items” page analyzed above indicates it remains the same (DHS, 2006d) (see Figure 11b of the appendix). Thus, the same problems of inadequacy of information persist. DHS has also failed to rectify the inaccurate scientific material described in the analysis above.

The analysis found that almost all of the material on the updated site was copied verbatim from the previous version, meaning that unnecessarily lengthy descriptions and generic advice are still present (see Figures 11c-d of the appendix). Though the changes are positive first steps, more needs to be done if Ready.gov aims to prepare the American public for a terrorist attack.

Response and Recommendations

This analysis exposes numerous inadequacies in Ready.gov based on criteria that investigated the accuracy, completeness, comprehensibility, and applicability of the information

contained within the site. Although “the problem...arises in the ‘disconnect’ inherent between a step-by-step set of instructions and the reality of a sudden disaster like a nuclear blast” (Patton, 2003, para. 16), the magnitude of faults found is excessive and leads to the recommendation that the information be updated as soon as possible. Unfortunately, this suggestion has been advocated since 2003 both publicly by reports like that done by Davis et al. (2003) as well as privately. Evidently, this approach has not worked since there have been few changes to inaccurate information since Ready.gov’s release in 2003, as a comparison of archives to the current site has revealed (Internet Archive, 2003). This indicates that a different approach must be taken in order to compel the Department of Homeland Security to change their policy on accuracy and take accountability for their information.

An approach devised by the Federation of American Scientists (FAS) uses technology to bring about this policy change. In the summer of 2006, FAS developed a serious internet resource called ReallyReady.org, modeled after Ready.gov (see Figure 12 of the appendix). Based on the same information as Ready.gov, ReallyReady.org is an alternative with straightforward, accurate, and applicable advice. One large change is the inclusion of clear and detailed steps critical to surviving attacks and emergencies, as suggested by Davis et al. (2003, p. 55). Like Ready.gov, ReallyReady.org is made up of three different sections: ReallyReady Business, ReallyReady America, and ReallyReady Disabilities. ReallyReady Kids was not included because Ready Kids is a satisfactory resource for educating children about the important of emergency preparedness.

ReallyReady Business and ReallyReady America address the same issues as their Ready.gov counterparts, but in a more understandable, concise, and accurate way. This is especially true of science-based information. ReallyReady Disabilities, a section added by FAS

in collaboration with the National Organization on Disability and its Emergency Preparedness Initiative, addresses the needs of individuals with disabilities in preparing for emergencies in a more detailed way than Ready.gov. All of the information available for individuals and families in ReallyReady America was modified page-by-page for ReallyReady Disabilities to meet the needs of individuals with disabilities.

The Federation of American Scientists hopes to achieve two purposes with ReallyReady.org. The first is to provide clear and correct information to citizens interested in preparing themselves and their families for an emergency. Secondly, FAS seeks to compel the Department of Homeland Security to take a serious look at Ready.gov and their policy on the accuracy of information and to make critical changes that will help Americans be prepared for any kind of attack or disaster. It is recommended that the Department of Homeland Security request the assistance of scientific, military, and emergency response experts in order to make these alterations. Until FAS deems Ready.gov acceptable, the information available on ReallyReady.org will remain updated, useful, and correct. By using such a public medium as the internet, the issues with this multi-million dollar Department of Homeland Security project will hopefully be rapidly brought to light and corrected swiftly.

This analysis thoroughly investigated the Department of Homeland Security's internet resource for their Ready Campaign, Ready.gov, which aims to educate the American public about preparing for and responding to a potential terrorist attack or natural disaster. A multitude of problems were found when the accuracy, completeness, comprehensibility, and applicability of the information available were examined. These findings led to the creation of an alternate resource, ReallyReady.org, which seeks to bring about a change in the Department of Homeland Security's policy on the accuracy of their information by providing serious, complete, and

understandable guidelines and advice for preparedness and response. As the threat of a terrorist attack remains a part of our daily lives, preparing to respond has never been more relevant and important than it is today.

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Notes

1. See Davis et. al(2003) for information about appropriate types of masks to have on hand (p.55)


Appendix

immediately.

Staying Put

Whether you are at home, work or elsewhere, there may be situations when it's simply best to stay where you are and avoid any uncertainty outside.


There are other circumstances when staying put and creating a barrier between yourself and potentially contaminated air outside, a process known as "sealing the room," is a matter of survival. Use available information to assess the situation. If you see large amounts of debris in the air, or if local authorities say the air is badly contaminated, you may want to take this kind of action.



Shelter-In-Place diagram
[Click here](#) to view, download or print with graphics..

The process used to seal the room is considered a temporary protective measure to create a barrier between you and potentially contaminated air outside. It is a type of sheltering in place that requires preplanning.

Figure 1: “Deciding to Stay or Go”: Generic advice provided to citizens on Ready.gov (DHS, 2003h)



Many potential terrorist attacks could send tiny microscopic "junk" into the air. For example, an explosion may release very fine debris that can cause lung damage. A biological attack may release germs that can make you sick if inhaled or absorbed through open cuts. Many of these agents can only hurt you if they get into your body, so think about **creating a barrier** between yourself and any contamination.

Nose and Mouth Protection

Face masks or dense-weave cotton material, that **snugly covers your nose and mouth** and is specifically fit for each member of the family. Do whatever you can to make the best fit possible for children.

Be prepared to improvise with what you have on hand to protect your nose, mouth, eyes and cuts in your skin. Anything that fits snugly over your nose and mouth, including any dense-weave cotton material, can help filter contaminants in an emergency. It is very important that most of the air you breathe comes through the mask or cloth, not around it. Do whatever you can to make the best fit possible for children. There are also a variety of face masks readily available in hardware stores that are rated based on how small a particle they can filter in an industrial setting.

Given the different types of attacks that could occur, there is not one solution for masking. For instance, simple cloth face masks can filter some of the airborne "junk" or germs you might breathe into your body, but will probably not protect you from chemical gases. **Still, something over your nose and mouth in an emergency is better than nothing.** Limiting how much "junk" gets into your body may impact whether or not you get sick or develop disease.

Figure 2: “Clean Air”: Unnecessarily verbose description on Ready.gov (DHS, 2003g)

Emergency Planning For Employees

Your employees and co-workers are your business's most important and valuable asset. There are some procedures you can put in place before a disaster, but you should also learn about what people need to recover after a disaster. It is possible that your staff will need time to ensure the well-being of their family members, but getting back to work is important to the personal recovery of people who have experienced disasters. It is important to re-establish routines, when possible.

1. **Two-way communication is central** before, during and after a disaster.

- Include emergency preparedness information in **newsletters, on company intranet, periodic employee emails** and other **internal communications** tools.
- Consider setting up a telephone calling tree, a **password-protected page** on the company website, an email alert or a **call-in voice recording** to communicate with employees in an emergency.
- Designate an out-of-town phone number where employees can leave an **"I'm Okay"** message in a catastrophic disaster.
- Provide all co-workers with **wallet cards** detailing instructions on how to get company information in an emergency situation. Include telephone numbers or Internet passwords for easy reference.
- Maintain** open communications where co-workers are free to bring questions and concerns to company leadership.
- Ensure you have established **staff members who are responsible for communicating** regularly to employees

It's Not Hard:
Equity Technology Corp Makes Preparedness a Priority

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Involve Co-Workers In Emergency Planning

One of the best methods of assuring your company's recovery is to **provide for your co-workers' well-being**. **Communicate regularly** with employees before, during and after an incident.

- Involve co-workers** from all levels in emergency planning.
- Use newsletters, intranets, staff meetings and other **internal communications** tools to communicate emergency plans and procedures.
- Set up **procedures to warn employees**. Plan how you will communicate with people who are hearing-impaired or have other **disabilities or who do not speak English**.
- Consider setting up a telephone call tree, **password-protected page** on the company **website, email** alert or **call-in voice recording** to communicate with employees in an emergency.
- Designate an out-of-town phone number where employees can leave an **"I'm Okay"** message in a catastrophic disaster. Remember to minimize your calls and keep them short so others can get through.
- Encourage employees to have alternate means and routes for getting to and from work**, in case their normal mode of transportation is interrupted.
- Keep a **record of employee emergency contact information** with other important documents in your emergency kit and at an off-site location.
- If you rent, lease or share space with other businesses, it is important to communicate, share and coordinate evacuation procedures and other emergency plans.

Figure 3: "Emergency Planning for Employees" and "Involve Co-Workers In Emergency Planning": Information repeated verbatim on multiple pages (repeated information is highlighted in boxes) (DHS, 2003m) and (DHS, 2003i)

Figure 4: Front page of Ready America: Demonstration of confusing navigation and site layout (DHS, 2003r)

BE INFORMED
BIOLOGICAL THREAT

[Overview](#) | [Influenza Pandemic](#) | [If There is a Biological Threat](#) | [Protect Yourself Symptoms and Hygiene](#)

OVERVIEW

[Click Here for Pandemic Flu information »](#)

Visual Guide
[Click here to view, download or print with graphics.](#)

A biological attack is the deliberate release of germs or other biological substances that can make you sick. Many agents must be inhaled, enter through a cut in the skin or be eaten to make you sick. Some biological agents, such as anthrax, do not cause contagious diseases. Others, like the smallpox virus, can result in diseases you can catch from other people.

[If There is a Biological Threat](#)

Unlike an explosion, a biological attack may or may not be immediately obvious. While it is possible that you will see signs of a biological attack, as was sometimes the case with the anthrax mailings, it is perhaps more likely that local health care workers will report a pattern of unusual illness or there will be a wave of sick people seeking emergency medical attention. You will probably learn of the danger through an emergency radio or TV broadcast, or some other signal used in your community. You might get a telephone call or emergency response workers may come to your door.

In the event of a biological attack, public health officials may not immediately be able to provide information on what you should do. It will take time to determine exactly what the illness is, how it should be treated, and who is in danger. However, you should watch TV, listen to the radio, or check the Internet for official news including the following:

- Are you in the group or area authorities consider in danger?
- What are the signs and symptoms of the disease?
- Are medications or vaccines being distributed?
- Where? Who should get them?
- Where should you seek emergency medical care if you become sick?

During a declared biological emergency:

1. If a **family member becomes sick**, it is important to be **suspicious**.

Figure 5a: “Biological Threat: Overview”: The first three paragraphs could be condensed to two or three bullet points(DHS, 2003c)

BE INFORMED
BIOLOGICAL THREAT

[Overview](#) | [Influenza Pandemic](#) | [If There is a Biological Threat](#) | [Protect Yourself Symptoms and Hygiene](#)

SYMPTOMS AND HYGIENE

Symptoms

Visual Guide
[Click here to view, download or print with graphics.](#)

If a family member develops any of the symptoms below, keep them separated from others if possible, practice good hygiene and cleanliness to avoid spreading germs, and seek medical advice.

- A temperature of more than 100 degrees
- Nausea and vomiting
- Stomachache
- Diarrhea
- Pale or flushed face
- Headache
- Cough
- Earache
- Thick discharge from nose
- Sore throat
- Rash or infection of the skin
- Red or pink eyes
- Loss of appetite
- Loss of energy or decreases in activity

Hygiene

If someone is sick, you should practice good hygiene and cleanliness to avoid spreading germs.

- Wash your hands with soap and water frequently.
- Do not share food or utensils.
- Cover your mouth and nose when coughing or sneezing.
- Consider having the sick person wear a face mask to avoid spreading germs.
- Plan to share health-related information with others, especially those who may need help understanding the situation and what specific actions to take.

Figure 5b: “Biological Threat: Symptoms and Hygiene”: Many of the symptoms are the same as the common cold (DHS, 2003e)

Figure 5c: “Biological Threat: Overview”: The link to pandemic flu information is directly below the Biological Threat header (DHS, 2003c)


Figure 5d: “Influenza Pandemic”: The information about a pandemic flu is not constructive or comprehensive (DHS, 2003i)

BE INFORMED
CHEMICAL THREAT

A chemical attack is the deliberate release of a toxic gas, liquid or solid that can poison people and the environment.

Visual Guide
[Click here](#) to view, download or print with graphics.

Possible Signs of Chemical Threat



- Many people suffering from watery eyes, twitching, choking, having trouble breathing or losing coordination.
- Many sick or dead birds, fish or small animals are also cause for suspicion.

If You See Signs of Chemical Attack: Find Clean Air Quickly

- Quickly try to **define the impacted area** or where the chemical is coming from, if possible.
- Take immediate action to **get away**.
- If the chemical is inside a building where you are, get out of the building without passing through the contaminated area, if possible.
- If you can't get out of the building or find clean air without passing through the area where you see signs of a chemical attack, it may be better to move as far away as possible and "[shelter-in-place](#)."
- If you are outside, quickly decide what is the fastest way to find clean air. Consider if you can get out of the area or if you should go inside the closest building and "shelter-in-place."

If You Think You Have Been Exposed to a Chemical


If your eyes are watering, your skin is stinging, and you are having trouble breathing, you may have been exposed to a chemical.

- If you think you may have been **exposed to a chemical, strip immediately and wash**.
- Look for a hose, fountain, or any source of **water**, and wash with **soap** if possible, being sure not to scrub the chemical into your skin.
- Seek emergency **medical attention**.

For more information, see "[Are you Ready?](#)" from [Federal Emergency Management Agency](#).

Figure 6: "Chemical Threat" (DHS, 2003f)

experts may predict at this time that a nuclear attack is less likely than other types, terrorism by its nature is unpredictable.



IF THERE IS A NUCLEAR BLAST

If there is advanced warning of an attack:

Take cover immediately, as far below ground as possible, though any shield or shelter will help protect you from the immediate effects of the blast and the pressure wave.

If there is no warning:

1. Quickly assess the situation.
2. Consider if you can get out of the area or if it would be better to go inside a building to limit the amount of radioactive material you are exposed to.
3. If you take shelter go as far below ground as possible, close windows and doors, turn off air conditioners, heaters or other ventilation systems. Stay where you are, watch TV, listen to the radio, or check the Internet for official news as it becomes available.
4. To limit the amount of radiation you are exposed to, think about shielding, distance and time.
 - **Shielding:** If you have a thick shield between yourself and the radioactive materials more of the radiation will be absorbed, and you will be exposed to less.
 - **Distance:** The farther away you are from the blast and the fallout the lower your exposure.
 - **Time:** Minimizing time spent exposed will also reduce your risk.

Use **available information** to **assess the situation**. If there is a significant radiation threat, health care authorities may or may not advise you to take **potassium iodide**. Potassium iodide is the same stuff added to your table salt to make it iodized. It may or may not protect your thyroid gland, which is particularly vulnerable, from

Figure 7a: "Nuclear Blast" (DHS, 2003o)

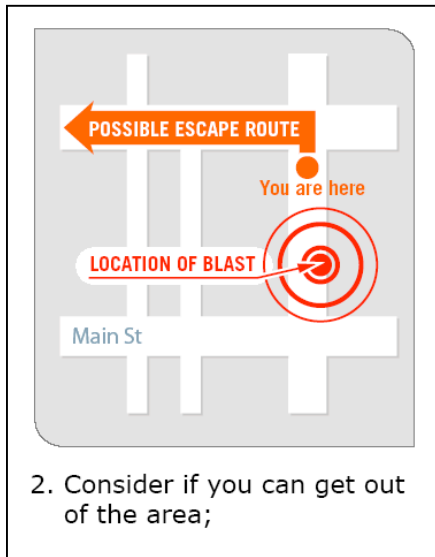


Figure 7b: “Nuclear Blast: Visual Guide”: Even a relatively small bomb could have a radius of destruction greater than one mile. This image understates the effects of a nuclear bomb (DHS, 2003o)

If There is a Radiation Threat or "Dirty Bomb"

1. If you are outside and there is an explosion or authorities warn of a radiation release nearby, cover your nose and mouth and quickly go inside a building that has not been damaged. If you are already inside check to see if your building has been damaged. If your building is stable, stay where you are.

Close windows and doors; turn off air conditioners, heaters or other ventilation systems.
2. If you are inside and there is an explosion near where you are or you are warned of a radiation release inside, cover nose and mouth and go outside immediately. Look for a building or other shelter that has not been damaged and quickly get inside.

Once you are inside, close windows and doors; turn off air conditioners, heaters or other ventilation systems.
3. If you think you have been exposed to radiation, take off your clothes and wash as soon as possible.
4. Stay where you are, watch TV, listen to the radio, or check the Internet for official news as it becomes available.
5. Remember: To limit the amount of radiation you are exposed to, think about shielding, distance and time.
 - **Shielding:** If you have a thick shield between yourself and the radioactive materials more of the radiation will be absorbed, and you will be exposed to less.
 - **Distance:** The farther away you are away from the blast and the fallout the lower your exposure.
 - **Time:** Minimizing time spent exposed will also reduce your risk.

As with any emergency, local authorities may not be able to immediately provide information on what is happening and what you should do. However, you should watch TV, listen to the radio, or check the Internet often for official news and information as it becomes

Figure 8: “Radiation Threat” (DHS, 2003q)

BE INFORMED

NATURAL DISASTERS

Some of the things you can do to prepare for the unexpected, such as making an emergency supply kit and developing a family communications plan, are the same for both a natural or man-made emergency. However, there are important differences among natural disasters that will impact the decisions you make and the actions you take. Some natural disasters are easily predicted, others happen without warning. Planning what to do in advance is an important part of being prepared.

Find out what natural disasters are most common in your area. You may be aware of some of your community's risks: others may surprise you. Historically, **flooding** is the nation's single most common natural disaster. Flooding can happen in every U.S. state and territory. **Earthquakes** are often thought of as a West Coast phenomenon, yet 45 states and territories in the United States are at moderate to high risk from earthquakes and are located in every region of the country. Other disasters may be more common in certain areas. **Tornados** are nature's most violent storms and can happen anywhere. However, states located in "Tornado Alley," as well as areas in Pennsylvania, New York, Connecticut, and Florida are at the highest risk for tornado damage. **Hurricanes** are severe tropical storms that form in the southern Atlantic Ocean, Caribbean Sea, Gulf of Mexico, and in the eastern Pacific Ocean. Scientists can now predict hurricanes, but people who live in coastal communities should plan what they will do if they are told to evacuate.

The [Federal Emergency Management Agency](#) has information available about the following natural disasters:

- [Earthquakes](#)

Figure 9: “Natural Disasters”: The first two paragraphs could be condensed to “Find out what disasters are common or possible in your area and prepare to respond to them” (DHS, 2003n)

- List of doctors and emergency contacts.

For People with Disabilities:

- Create a support network to help in an emergency.
- Tell these people where you keep your emergency supplies.
- Give one member of your support network a key to your house or apartment.
- Contact your city or county government's emergency information management office. Many local offices keep lists of people with disabilities so they can be located quickly in a sudden emergency.
- Wear medical alert tags or bracelets to help identify your disability.
- If you are dependent on dialysis or other life sustaining treatment, know the location and availability of more than one facility.
- Show others how to operate your wheelchair.
- Know the size and weight of your wheelchair, in addition to whether or not it is collapsible, in case it has to be transported.
- **Additional Supplies for People with Disabilities:**
 - Prescription medicines, list of medications including dosage, list of any allergies.
 - Extra eyeglasses and hearing-aid batteries.
 - Extra wheelchair batteries, oxygen.
 - Keep a list of the style and serial number of medical devices.
 - Medical insurance and Medicare cards.
 - List of doctors, relatives or friends who should be notified if you are hurt.

For more information on supplies, see "[Your Family Disaster Supply Kit](#)" from [American Red Cross](#) and [Federal Emergency Management Agency](#).

For more information on special needs, see [Disaster Preparedness For People With Disabilities](#) from [FEMA](#), and [Disaster Preparedness for Seniors by Seniors](#) from the [Red Cross](#).

Figure 10a: “Special Needs Items”: There are only twenty-one lines of general information available for how individuals with disabilities should prepare for an emergency (DHS, 2003u)

<p>PET ITEMS</p> <p>Preparing Your Pets for Emergencies Makes Sense. Get Ready Now.</p> <p>» Download our Ready Pets brochure (PDF, 345Kb).</p> <p>If you are like millions of animal owners nationwide, your pet is an important member of your household. The likelihood that you and your animals will survive an emergency such as a fire or flood, tornado or terrorist attack depends largely on emergency planning done today. Some of the things you can do to prepare for the unexpected, such as assembling an animal emergency supply kit and developing a pet care buddy system, are the same for any emergency. Whether you decide to stay put in an emergency or evacuate to a safer location, you will need to make plans in advance for your pets. Keep in mind that what's best for you is typically what's best for your animals.</p> <p>If you must evacuate, take your pets with you if possible. However, if you are going to a public shelter, it is important to understand that animals may not be allowed inside. Plan in advance for shelter alternatives that will work for both you and your pets.</p> <p>Make a back-up emergency plan in case you can't care for your animals yourself. Develop a buddy system with neighbors, friends and relatives to make sure that someone is available to care for or evacuate your pets if you are unable to do so. Be prepared to improvise and use what you have on hand to make it on your own for at least three days, maybe longer.</p> <p>Preparing for the unexpected makes sense. Get Ready Now.</p> <p>Link to Ready.gov FAQ About Ready.gov Useful Links Site Map Contact Ready.gov of Use Accessibility Partners FirstGov.gov No FEAR Act FOIA En Español</p> <p><small>Ready.gov is from the U.S. Department of Homeland Security.</small></p>	<p>For People with Disabilities:</p> <ul style="list-style-type: none"> • Create a support network to help in an emergency. • Tell these people where you keep your emergency supplies. • Give one member of your support network a key to your house or apartment. • Contact your city or county government's emergency information management office. Many local offices keep lists of people with disabilities so they can be located quickly in a sudden emergency. • Wear medical alert tags or bracelets to help identify your disability. • If you are dependent on dialysis or other life sustaining treatment, know the location and availability of more than one facility. • Show others how to operate your wheelchair. • Know the size and weight of your wheelchair, in addition to whether or not it is collapsible, in case it has to be transported. • Additional Supplies for People with Disabilities: <ul style="list-style-type: none"> • Prescription medicines, list of medications including dosage, list of any allergies. • Extra eyeglasses and hearing-aid batteries. • Extra wheelchair batteries, oxygen. • Keep a list of the style and serial number of medical devices. • Medical insurance and Medicare cards. • List of doctors, relatives or friends who should be notified if you are hurt. <p>For more information on supplies, see "Your Family Disaster Supply Kit" from American Red Cross and Federal Emergency Management Agency.</p> <p>For more information on special needs, see Disaster Preparedness For People With Disabilities from FEMA, and Disaster Preparedness for Seniors by Seniors from the Red Cross.</p>
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Figure 10b: “Pet Items” and “Special Needs Items”: The same amount of information available for preparing your pet is for preparing yourself and your family if you have a disability (DHS, 2003p) and (DHS, 2003u)



Figure 11a: “Ready.gov”: Updated home page (DHS, 2006e)


- List of doctors and emergency contacts.

For People with Disabilities:

- Create a support network to help in an emergency.
- Tell these people where you keep your emergency supplies.
- Give one member of your support network a key to your house or apartment.
- Contact your city or county government's emergency information management office. Many local offices keep lists of people with disabilities so they can be located quickly in a sudden emergency.
- Wear medical alert tags or bracelets to help identify your disability.
- If you are dependent on dialysis or other life sustaining treatment, know the location and availability of more than one facility.
- Show others how to operate your wheelchair.
- Know the size and weight of your wheelchair, in addition to whether or not it is collapsible, in case it has to be transported.
- **Additional Supplies for People with Disabilities:**
 - Prescription medicines, list of medications including dosage, list of any allergies.
 - Extra eyeglasses and hearing-aid batteries.
 - Extra wheelchair batteries, oxygen.
 - Keep a list of the style and serial number of medical devices.
 - Medical insurance and Medicare cards.
 - List of doctors, relatives or friends who should be notified if you are hurt.

For more information on supplies, see "[Your Family Disaster Supply Kit](#)" from [American Red Cross](#) and [Federal Emergency Management Agency](#).

For more information on special needs, see [Disaster Preparedness For People With Disabilities](#) from [FEMA](#), and [Disaster Preparedness for Seniors by Seniors](#) from the [Red Cross](#).



Disabled and Special Needs

For People With Disabilities:

- Create a support network to help in an emergency.
- Tell these people where you keep your emergency supplies.
- Give one member of your support network a key to your house or apartment.
- Contact your city or county government's emergency information management office. Many local offices keep lists of people with disabilities so they can be located quickly in a sudden emergency.
- Wear medical alert tags or bracelets to help identify your disability.
- If you are dependent on dialysis or other life sustaining treatment, know the location and availability of more than one facility.
- Show others how to operate your wheelchair.
- Know the size and weight of your wheelchair, in addition to whether or not it is collapsible, in case it has to be transported.
- **Additional Supplies for People with Disabilities:**
 - Prescription medicines, list of medications including dosage, list of any allergies.
 - Extra eyeglasses and hearing-aid batteries.
 - Extra wheelchair batteries, oxygen.
 - Keep a list of the style and serial number of medical devices.
 - Medical insurance and Medicare cards.
 - List of doctors, relatives or friends who should be notified if you are hurt.

[Click Here](#) to download a checklist of Special Needs Items. (26, 55Kb)

More Information

For information and tools related to emergency preparedness for persons


Figure 11b: “Special Needs Items” and “Disabled and Special Needs”: Comparison of 2003 version of Ready.gov to 2006 version- all words are the same (DHS, 2003u) and (DHS, 2006c)

BE INFORMED

NUCLEAR BLAST

A nuclear blast is an explosion with intense light and heat, a damaging pressure wave and widespread radioactive material that can contaminate the air, water and ground surfaces for miles around. **During a nuclear incident, it is important to avoid radioactive material, if possible.** While experts may predict at this time that a nuclear attack is less likely than other types, terrorism by its nature is unpredictable.

Visual Guide
[Click here](#) to view, download or print with graphics.



IF THERE IS A NUCLEAR BLAST

If there is advanced warning of an attack:

Take cover immediately, as far below ground as possible, though any shield or shelter will help protect you from the immediate effects of the blast and the pressure wave.


If there is no warning:

1. Quickly assess the situation.
2. Consider if you can get out of the area or if it would be better to go inside a building to limit the amount of radioactive material you are exposed to.
3. If you take shelter go as far below ground as possible, close windows and doors, turn off air conditioners, heaters or other ventilation systems. Stay where you are, watch TV, listen to the radio, or check the Internet for official news as it becomes available.
4. To limit the amount of radiation you are exposed to, think about shielding, distance and time.
 - **Shielding:** If you have a thick shield between yourself and the radioactive materials more of the radiation will be absorbed, and you will be exposed to less.
 - **Distance:** The farther away you are from the blast and the fallout the lower your exposure.
 - **Time:** Minimizing time spent exposed will also reduce your risk.

Use **available information to assess the situation.** If there is a significant radiation threat, health care authorities may or may not advise you to take **potassium iodide**. Potassium iodide is the same stuff added to your table salt to make it iodized. It may or may not protect your thyroid gland, which is particularly vulnerable, from radioactive iodine exposure. Plan to **speak with your health care provider in advance** about what makes sense for your family.

For more information, see [Potassium Iodide](#) from [Centers for Disease Control](#).

For more general information, see "[Are you Ready?](#)" from [Federal Emergency](#)



Nuclear Threat

A nuclear blast is an explosion with intense light and heat, a damaging pressure wave and widespread radioactive material that can contaminate the air, water and ground surfaces for miles around. **During a nuclear incident, it is important to avoid radioactive material, if possible.** While experts may predict at this time that a nuclear attack is less likely than other types, terrorism by its nature is unpredictable.

Visual Guide
[Click here](#) to view and download the Nuclear Blast Visual Guide. (26, 50Kb)

If There Is Advanced Warning Of An Attack

Take cover immediately, as far below ground as possible, though any shield or shelter will help protect you from the immediate effects of the blast and the pressure wave.

If There Is No Warning

- Quickly assess the situation.
- Consider if you can get out of the area or if it would be better to go inside a building to limit the amount of radioactive material you are exposed to.
- If you take shelter go as far below ground as possible, close windows and doors, turn off air conditioners, heaters or other ventilation systems. Stay where you are, watch TV, listen to the radio, or check the Internet for official news as it becomes available.
- To limit the amount of radiation you are exposed to, think about shielding, distance and time.
 - **Shielding:** If you have a thick shield between yourself and the radioactive materials more of the radiation will be absorbed, and you will be exposed to less.
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Use **available information to assess the situation.** If there is a significant radiation threat, health care authorities may or may not advise you to take **potassium iodide**. Potassium iodide is the same stuff added to your table salt to make it iodized. It may or may not protect your thyroid gland, which is particularly vulnerable, from radioactive iodine exposure. Plan to **speak with your health care provider in advance** about what makes sense for your family.

For more information, see [Potassium Iodide](#) from [Centers for Disease Control](#).

For more general information, see "[Are you Ready?](#)" from [Federal Emergency Management Agency](#).

Figure 11c: “Nuclear Blast” and “Nuclear Threat”: Comparison of 2003 version of Ready.gov to 2006 version- all words are the same (DHS, 2003o) and (DHS, 2006f)

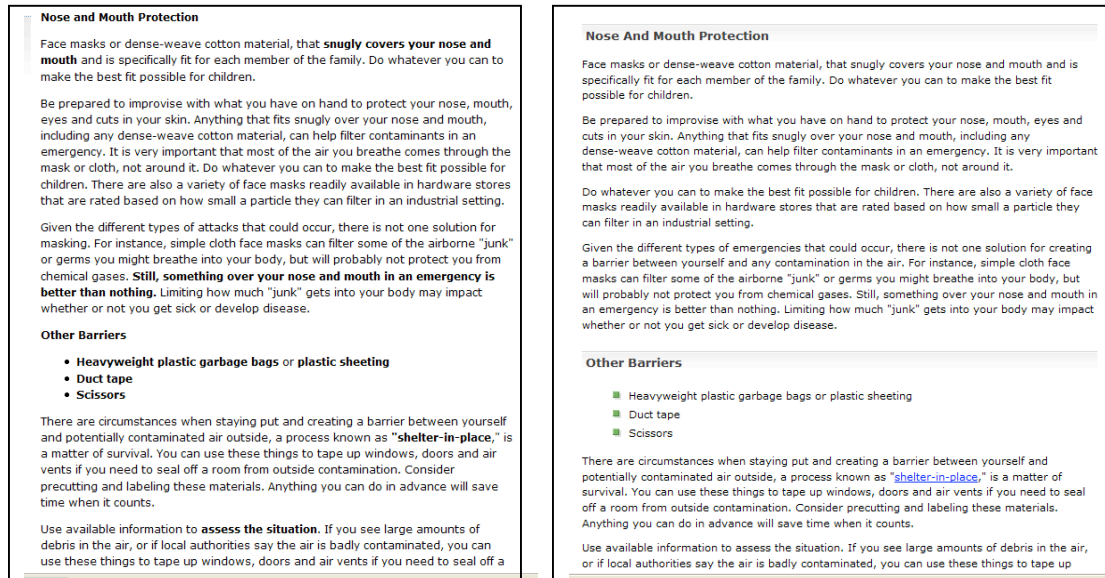


Figure 11d: "Clean Air": Comparison of 2003 version of Ready.gov to 2006 version- all words are the same (DHS, 2003g) and (DHS, 2006b)



Figure 12: "ReallyReady.org": Home page (Federation of American Scientists, 2006)