

Disaster Planning

There are many points to consider when developing a disaster plan for your animal facility.

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If you are reading this article, it is likely that you were entrusted with the task of devising a disaster plan for your facility. I can relate, as the task to develop such a plan that worked for all of the animal care units at the University of Michigan's decentralized facilities fell to me not long ago. I was handed a large box with plans from other facilities, reference material on remediation, three ring binders from conferences on disaster planning, books, the list went on and on. Being diligent, I immediately began reviewing all of these documents, and what I found didn't really help me in creating a plan for my institution. The materials were either specific to a facility (i.e., if the power fails call Bob; Joe has a truck to move animals in; Randy lives close by), or were so generic they didn't provide any details at all. While the reference materials were helpful, providing examples of what can happen and advice on what to do, nothing I read really seemed to provide a clear, concise path to creating an organized plan responders could follow. It seemed a combination of facility details and advice from the reference materials would be the best course of action to follow. My outline would become the University's Animal Facility Disaster Planning Guidelines, allowing each individual facility manager to create an effective plan quickly and efficiently. It also allowed the facility managers to have a clear expectation of what the IACUC would require of them in their planning documents and would assure the IACUC that animals would be maintained in humane conditions during emergency conditions.

Designate the Leaders of the Response Effort

The first point to address is: Who is in charge of the response efforts? *The Guide for the Care and Use of Laboratory Animals (ILAR)*, indicates that a "colony manager or responsible veterinarian should be

involved." Step one in our plan was simply designating this person. We advised creating a leadership team, as one person cannot perform all of the planning needed. We called ours CIRT, for Critical Incident Response Team. It really doesn't matter what you call this team, but it is important that an acronym be involved. Who is on this team will largely depend on the make-up and size of the facility. Our largest animal care unit oversees approximately 90% of the animals on campus, so including computer personnel, office staff, area supervisors, and other veterinary staff provided a well rounded team. If you're a smaller facility, then the leadership team may not be this diverse. Remember that this team is really only here to organize, write, and direct the disaster response efforts. Later in the plan, other individuals will be included, as advisors (key contacts) that can provide technical expertise or information. Animal care staff will be included as responders to be directed by the leadership team.

Designate a Command Center

Once the team is in place, the next step is to decide the location the leadership team will direct from in an emergency. We call this location the Command Center, or CC, in our outline. It is important for the people who will be assisting the leadership team to know where this location is and what they can find there, aside from instructions. The CC should be centrally located and allow ready access to the area, or areas, of concern. If you have a large facility, it would be a good idea to have several locations identified and let your responding staff know which one will be used either during practice drills or when calling them in for a response. Again, it should be located close to where the response efforts will be focused. An area in the CC should be devoted to storing items that will be used by responding staff.

Storing items (i.e., food, water, flashlights, extra batteries, first aid supplies) that responders will need allows distribution and monitoring by the leadership team. Staff can report to the CC, receive instructions and supplies from the leadership team, and then head out to resolve/gather information on the situation. Ideally, the CC should be immune from loss of function. In other words, have back-up power for your CC area. Power loss is often the single factor that creates cascading disruptions in these situations. Without power there are issues of temperature, communication, light, water, and potentially, issues of access.

Designate Key Contacts

Identify people who have, or can get, information that helps them. These 'Key Contacts' are individuals whose contact information should be updated and kept on file routinely. Multiple means of contacting these people should be gathered, as normal means may not be available. Discussions with these people during the planning stage will allow the leadership team to know which key contact will inform or update them about heating/cooling issues, security, or access to areas (if contaminated or dangerous for people). These personnel will include HVAC staff, public safety workers, local or state law enforcement, or local fire department. Access to areas can also be facilitated if these contacts know the leadership team's needs and, simply, who they are and how to contact them. Other key individuals to communicate with will be laboratory personnel with species or projects that require special consideration. These people will be able to keep you abreast of safety precautions related to their work, or the leadership team will need to update them on what can or can't be done for their animals/projects. Review of this list is important, as is having a clear idea of information these individuals can provide or will need during an event. Regular review will also allow you to include personnel changes so there are no surprises during an event.

Identify Who Will Respond

The building blocks of the written plan are now in place. The written plan, to this point, should identify who is in charge, where they will be, who can provide assistance, and helpful information.

Identify animal care personnel who will respond to the leadership team's request for assistance. As part of the risk assessment strategy, determine the minimum number of people that will be needed to health check animals, feed/water animals, change cages, etc. In creating this group of personnel, consider how long these people can reasonably perform the needed tasks. It is likely that two or more teams who can respond will be needed. In times of crisis, longer shifts could be required. Fatigue can set in quickly and overwhelm your responders, hampering their efforts and potentially creating issues for the animals. Having fresh people is helpful! As mentioned before, multiple means of contact will be needed. Staff may have evacuated their homes, depending on the situation. Being able to contact family members for these individuals may become a necessary step in finding them. Having this information available ahead of time will facilitate these efforts. Mobilizing respondents is best done by utilizing a phone tree. The leadership team would make calls to several "branches." The person they contact would then call the next person on the list, and so on, until all the respondents have been notified. If phone services cannot be used, discussing events and criteria for reporting would be essential in assuring that staff is available to help the leadership team.

General Preparations

It would seem the logical next step might be to develop plans for varying types of disasters, however preparing individual plans to respond to specific types is both time consuming and repetitive. Since most of what would be done is the same regardless of the actual event, general preparations are the most important aspect of the plan. Disasters have common issues which can be broken down into the following questions: Can staff get to the facility? Are buildings safe for staff to enter? Is there power? Is food/water available? How long can animals be maintained? In answering these questions, you will find that you have prepared for the vast majority of issues caused by an event.

Can staff get to the facility? If an event blocks or disrupts roads, then responders may not be able to get to the facility. Michigan is in a prime location for winter storms, where ice and snow can

create hazardous conditions, limiting responders' travel. Responders who are within walking distance become a key asset in these situations. Individuals with four-wheel drive vehicles can be identified to shuttle staff. Wind and water (i.e., tornados, hurricanes, floods, etc.) can easily cause roadblocks. In these cases, identifying alternate routes for staff is recommended. Police and National Guard may limit access to certain areas, depending on the situation. They may also be able to provide detour information, or escort individuals to the area where they are needed. This is facilitated by having essential personnel equipped with emergency responder badges that identify them as authorized to access areas. Exploring and updating these options will help assure that staff can respond when needed.

Are buildings safe for staff to enter? The answer to this question will come from contacts with the fire department, hazmat, police, or public safety officers. If it is not safe for personnel to enter, response efforts will be stopped short until it is. While we all care deeply for our animal charges, risking the life of staff is not advisable. While waiting, the leadership team should utilize their key contacts to gather as much information as possible, as related to conditions in the facility. Once buildings are deemed safe, response efforts can begin.

Do you have power? Without power, animals may need to be moved and normal means of communication may not function. Developing priority lists becomes essential. Knowing which animals should be moved first, which are more valuable to researchers, which potentially compromise public health and safety, etc. are important pieces of the priority list puzzle. Having priority lists in place ahead of time allows personnel in the field the ability to make decisions and proceed. This is increasingly important if the event requires quick action and communication is not functioning. As long as phone lines are not knocked down, they should be operational. Most people have cordless phones, which have many advantages, UNLESS there is no power, as these devices require electricity to operate. Corded phones use the power in the phone lines to function. Keeping these on hand for power outage situations can make phone conversations possible. Cell phones are an everyday item for most people; however, they may not be reliable during power outages. Text messaging may be a more reliable means of sending messages during these

situations. Phone lines often are jammed during a disaster. Planning ahead can be very useful for this situation, as the United States Government and cell phone companies have programs to obtain priority service during these events. The Government Emergency Telecommunications Service (GETS), information available at www.ncs.gov, provides the identified individuals with a calling card number. Functional at any operational phone, this allows connection to a system with a better chance of a successful call. Cell phone companies have programs in place that allow numbers to be identified as needing priority service. Satellite phones can also experience call overloads; however, the GETS program works with these devices. The inclusion of this information is credited to an institution that discovered these paths to successful calling during the Hurricane Katrina response. It was shared during the 2006 National AALAS meeting and during other presentations these individuals have made. While it is nice to be prepared ahead of time, remember that everything in life is a learning experience. Our best laid plans can always be improved. Communication with other institutions and local and state law enforcement can provide information not previously known to the leadership team.

Are food and water available? Most institutions keep extra supplies on hand as a matter of everyday practice. Knowing available food resources will allow the leadership team to plan maximum time frames in which food can be supplied to the animals. For events where the leadership team has some notice, extra supplies can be ordered to supplement and extend these time frames. In many instances, no notice will be given and what is on hand will need to be rationed appropriately. Having information on "priority animals" is helpful in deciding how to maximize supplies. These animals could be rare or expensive and a mechanism to identify them should be in place, as contacting researchers after an event may not be possible. If they can be reached to clarify, great; if not, it is best to plan in advance. Having a reliable water supply can be a trickier situation. Some institutions may be lucky enough to have their own water supply. Most of us will depend on municipal water supplies, which may not be functional or may become contaminated during an event. Many ideas exist for back-up supplies, such as: Water supply trucks, gel packs used for shipping, water storage barrels, or the ability to

boil contaminated water.

How long can animals be maintained? This question will be the most difficult to answer, as the event will influence this response. Provided the steps are in place to have staff respond, heating/cooling issues have been addressed, and food and water are available to the animals, then limits are based on human fatigue and supplies. If these run out prior to a return to normal function, then other options will need to be considered by the leadership team. Priority lists will again aid in this uncomfortable step. Euthanasia of animals, initially based on the priority lists, may become necessary if conditions deteriorate to unacceptable levels. Preparing for this worst case scenario by having euthanasia supplies could prevent an already bad situation from becoming worse.

Once these issues have been addressed for your institution's situations, practice is the last key step to take. This step is one that many institutions will skip, as they have the plan in place and people seem to know what to do. Most things rarely go right the first time. Having practice sessions creates familiarity for

responding staff, comfort sure to come in handy during the chaos after an event. Suggestions from individuals not involved in the planning process can be insightful and useful in smoothing out processes and identifying flaws in pre-planning.

Having a well-written and rehearsed plan won't guarantee success after an event, but such preparedness does increase the likelihood of getting through an emergency with minimal loss of resources, research, or animal life, which is everyone's goal.

Copies of the University of Michigan's Animal Facilities Disaster Planning Guidelines are available. I would like to thank Dr. Bohm and Officer Aertker from Tulane University, as many of the points noted in this article that will benefit other institutions are a direct result of their experiences after Katrina.

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