



ROYAL CANIN

SHELTER SANITATION
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MORE SCRUBBING = MORE LIVES SAVED

Emmanuel Fontaine
DVM, MSc, PhD, Dipl ECAR
Royal Canin Canada

MARS
petcare
A better world for pets.

When you are a scientific communication officer, one day or another, you will have to do lectures. I am not complaining here since, in my current position, this is something I really enjoy! It gives me the opportunity to connect with our clients and discuss their questions and concerns. No better way to stay in touch with the field!

When you lecture so often, you tend to become perfectionist. I now focus on many little details I really did not care about when I first started. In 2015, one I will particularly pay attention to: providing our attendees with written notes.

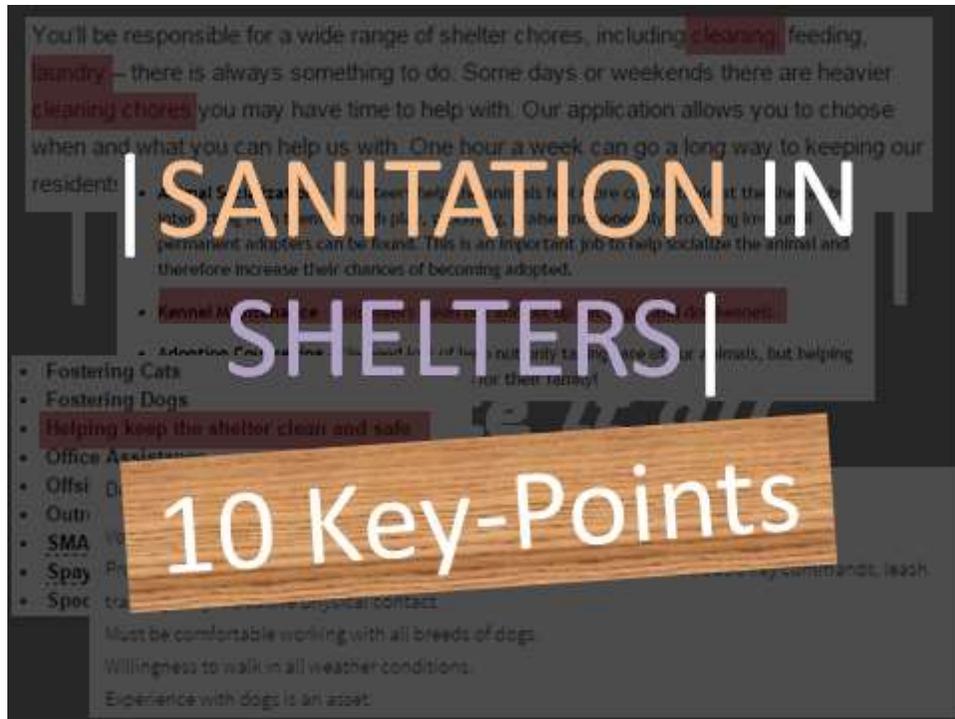
It makes total sense: our lectures usually contain lots of information and, as shown by several studies on human cognitive psychology, we only retain 10% of the content that was presented.

In the past I was sharing a copy of my slides but more and more, these only display pictures: no text, so hard to remember what the message was, especially when you review the slides few days or weeks after the event took place.

All my new presentations will now come with lecture notes in an e-book format. Here is the one from the talks I did during a 2015 roadshow in India:

“ Shelter sanitation : more scrubbing = more lives saved ”

As much as I like lecturing, I like writing even more. I hope this document will be helpful for you guys, and if you have any comment/idea on how to make the content part of our seminars even better, don't hesitate to let me know, I'm always open to constructive suggestions! You'll find my contact info at the end of this e-book! Good reading then !



What does working or volunteering in an animal shelter mean to you ? « I want to bring joy and happiness to the life of those abandoned pets ». « As a life-long pet lover, I feel I'm expressing that in the best way possible by helping saving lives ». « I cannot believe how rewarded I feel each time a lost soul jailed in these shelters is released to a new home. » Those are real testimonials you can find over the world wide web, and I think they tell it all. We join because we want to help. We join because we want to make a difference by providing those pets all the love and care they deserve. Isn't it an an idealistic vision ? Maybe, but we definitely need this to face the harsh reality.

There is unfortunately another side of the coin, the side we veterinarian often think of first. Shelters are predisposed environments for infectious diseases outbreaks. Not a day goes by without me seeing headlines on social media about an outbreak of whatever pathogen in an animal shelter.

And here is something I often hear: « Ok, but where does all of this connect? This is veterinary stuff, what role could we play? ». Well, certainly one of the most important. Especially if you participate in your shelter sanitation plan.

Let's find out how more scrubbing can indeed help save more pets.

#1 THE | ENVIRONMENT | : a germ reservoir

In order to start, I would like to introduce you to some of those villains you probably heard of (and if you did not, you definitely need to know a bit about them if you work or volunteer in an animal shelter).

Meet « Parvo », a nude virus that causes hemorrhagic diarrhea in dogs. He also goes by the name « Panleuk » : same type of virus, that affects cats with similar of symptoms. Terrible pathogens, parvo/panleuk outbreak are the most common we hear of in animal shelters.

Find out more about those diseases here :

<http://royalcaninshelterprogram.ning.com/profiles/blogs/12-interesting-facts-about-parvo-in-shelters>

<http://royalcaninshelterprogram.ning.com/profiles/blogs/not-only-for-dogs-cpv-2c>

And here come other bad guys, the Caliciviruses (aka “Calici”). These are also nude viruses that cause upper respiratory diseases in cats.

Find out more about this disease here :

<http://royalcaninshelterprogram.ning.com/profiles/blogs/feline-upper-respiratory-tract-diseases-things-to-know-to-better>

I would also like you to meet Giardia and Coccidia, two protozoans that also cause digestive upset and especially diarrhea in dogs and cats.

Find out more about this disease here :

<http://royalcaninbreedersclub.ning.com/profiles/blogs/should-you-worry-about-coccidia-infection-in-catteries-and>

<http://royalcaninbreedersclub.ning.com/profiles/blogs/6425736:BlogPost:54564>

<http://royalcaninbreedersclub.ning.com/profiles/blogs/should-you-worry-about-coccidia-infection-in-catteries-and-2>

<http://royalcaninbreedersclub.ning.com/profiles/blogs/giardia-duodenalis-important-things-to-know-about-it>

But the most feared of all, without doubt, is ringworm, a fungal disease that affects especially cats, causing skin disorders. Not deadly, but definitely resource-consuming for the shelters that have to deal with it.

Find out more about this disease here:

<http://royalcaninshelterprogram.ning.com/profiles/blogs/shelter-medicine-27-things-shelter-staff-should-know-about>

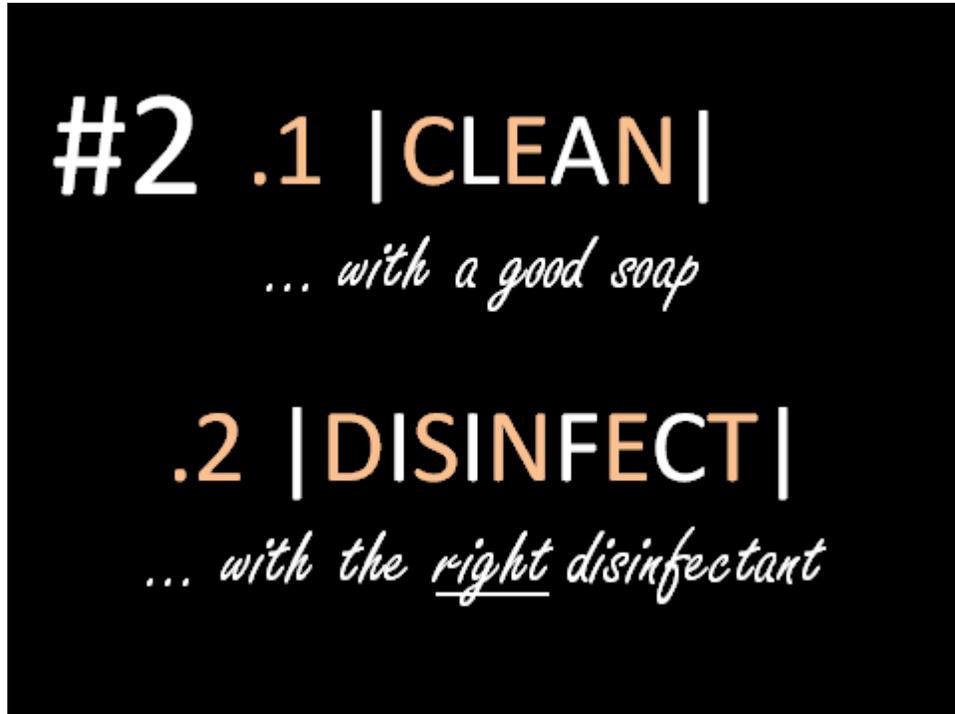
<http://royalcaninshelterprogram.ning.com/profiles/blogs/shelter-medicine-27-things-shelter-staff-should-know-about-1>

<http://royalcaninshelterprogram.ning.com/profiles/blogs/ringworm-cultures-red-does-not-always-mean-infected>

The list of villains could go on and on but those 5 have something in common : they are all resistant in the environment. Parvo/panleuk viruses can survive up to a year , ringworm spores more than 18 months, caliciviruses usually several weeks while giardia and coccidia cysts survive several months. They are constant threat lurking in the dark, potentially able to cause a terrible outbreak in your structure.

Transmission does not only occur by contact between animals, but also by contamination via the environment. In shelters, these diseases have the potential to easily spread among animals and turn into outbreaks that are difficult to control.

Medical prevention measures like vaccination, deworming and other preventatives clearly play an important role here. But you understand that you also need to get rid of those pathogens that are in the environment. That is what sanitation is for. That's where you play a main role!



How do we kill those bad bugs in the environment? The answer: sanitation. And as we already mention, this is where you are in charge and you can make a difference.

Sanitation protocols can sometimes seem complex and I often hear people complaining they do not understand why they have to go through all that stuff. Sure, we would all love to have simpler protocols. Simplicity however always comes with a price... A price you might not be willing to pay in animal shelters. I believe that before asking for simplicity, it is important to understand some basic concepts. A fundamental one is the difference between cleaning and disinfecting.

Those two words are often used mixed up while they consist in two totally different operations, two different steps of a sanitation protocol that complement each other.

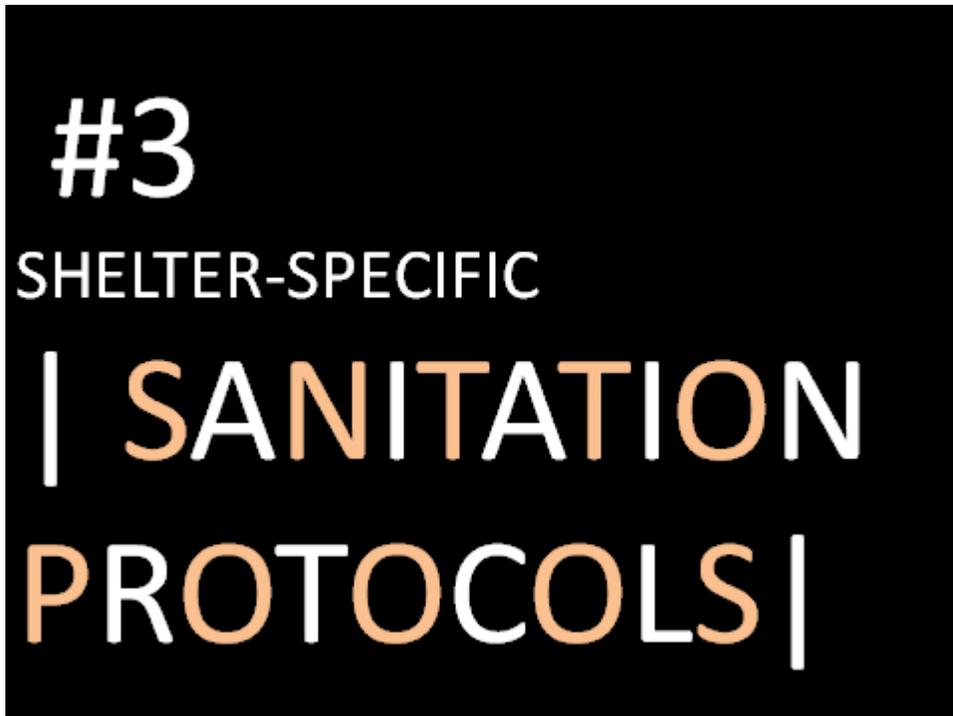
Read our blog on this topic to find out the difference :

<http://royalcaninshelterprogram.ning.com/profiles/blogs/cleaning-vs-disinfecting-why-your-shelter-staff-needs-to-know-the>

The most common mistake we see in the field consists in using a disinfectant (= a chemical that is meant to destroy germs) like bleach, in place of a cleaner (= detergent, a cleansing agent that combines with impurities and dirt to make them more soluble so you could more easily get rid of them).

Why is that such a big deal? Let's go back to our example here: bleach is a very good disinfectant, and will destroy many germs that cause issue in shelters. However, it is not a detergent... and is inactivated in the presence of organic matter. If you did not remove the dirt first (the cleaning step) and use directly the bleach, this one will be inactivated. You then think you are protected... while you are absolutely not.

One might see it as a little mistake, but that will definitely make a huge difference in at-risk environments like shelters.



#3
SHELTER-SPECIFIC
| SANITATION
PROTOCOLS |

Now that you know the difference between cleaning and disinfecting, some questions remain. Like which products to pick to obtain optimal results?

For cleaners, detergents or degreasers will be a right fit. You want something that will scrap the organic matter to increase the potency of your disinfectant then. Dish soap is a good and cheap option that is often used in many shelters but professional alternatives exist as well.

What about the disinfectants ? They are usually chosen based on their activity on the main pathogens that are found in shelters. One thing to keep in mind : there is no perfect product.

Take a look at the following tables that will give you an idea of the spectrum of activity of different categories of disinfectants used in shelters :

<https://www.pinterest.com/pin/331225747570844285/>

<https://www.pinterest.com/pin/331225747572670911/>

Mixing different products is never a good option : some will inactivate one another (like bleach + quaternary ammoniums) while others will lead to production of toxic gas (like bleach + potassium peroxymonosulfate or bleach + AHP).

There is a reason behind your shelter sanitation protocols. Don't believe any product will do the trick. As you could see, each of them has its own specificities. Unless told otherwise, always stick to the recommended products in your structure !

#4

STRICTLY | FOLLOW |

THE WRITTEN SANITATION PROTOCOLS

Another important thing to keep in mind : it is not only about the products, it is also about the way you use them. There are usually three essential elements to focus on:

- You need to use those products at the right concentration. Let's take bleach as an example : the recommended dilution to kill nude viruses is 1/32 (of a 5.25% bleach solution) but if you want to get rid of ringworm, you will need to use a 1/10 dilution.

If your bleach solution is not 5.25%, here is a link to a bleach dilution calculator that will come in handy : <https://www.pinterest.com/pin/331225747572592850/>

- You need to respect the recommended contact time for the product. Bleach for instance needs to sit for 10 minutes to be effective while other products like AHP have a shorter required contact time (between 1 and 5 minutes).

More information on our table here : <https://www.pinterest.com/pin/331225747569235873/>

- Some products need to be rinsed after being used. That is the case for bleach and quaternary ammoniums. If you do not rinse them, they can be harmful for the pets (paws irritation ; animals may lick the products which often leads to vomiting and digestive upset).



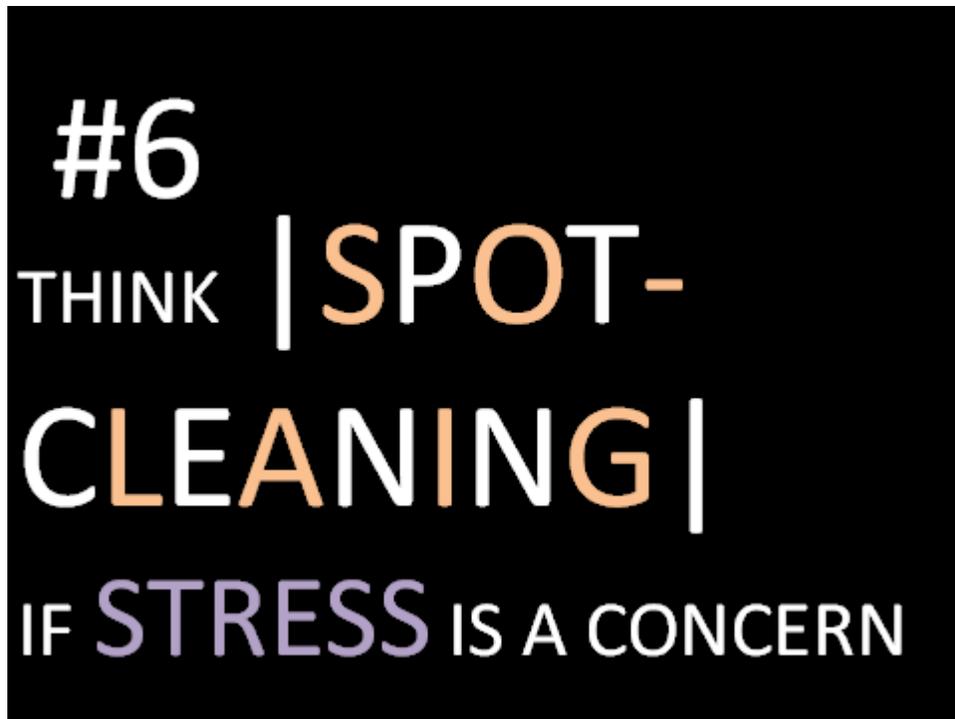
Remember what we said earlier: disinfectants are not fully efficient in the presence of organic matter. Which means when you deep clean/disinfect a room, a cage, animals should not be present. It might sound obvious but this is a mistake often seen in the field.

Find out more about it here: <http://royalcaninshelterprogram.ning.com/profiles/blogs/sanitation-in-shelters-why-there-should-be-no-animal-around-while>

Many shelters use double-sided cages separated with a guillotine door (an example here <https://www.pinterest.com/pin/331225747572734879/>). Others have outside runs. Or cats are moved into crates when the full procedure is being performed. As you can see, alternatives exist!

Drying the surfaces after cleaning/disinfecting is also an essential part for success. Indeed, after the cleaning/disinfecting has been performed (and eventually the rinsing depending on which product you use), the floors are often wet. Small water pools can form on the floors, inside which potent

pathogens might be protected. A full sanitation procedure is never completed until the floors are totally dried. Again, a tiny little detail, that can make a huge difference!



The different steps we described are part of what we now refer to as “full” or “deep” cleaning/disinfecting. This is what has been suggested for decades to eliminate the germs in the environment. They are still valid when dealing with heavily soiled environments. New concepts have however recently emerged.

Animals housed in shelters are highly susceptible to stress. Stress leads to secretion of cortisol that suppresses the immune system. Never a good thing in an environment already prone to infectious diseases... This is especially true in cats. The emphasis today is put on how to decrease stress in these animals to ensure a better health when they are housed at the shelter.

Cleaning time is important, but it is also one of the most important stress generator inside the structure because of all the noise it is associated with. Moreover, two important causes of stress for cats during cleaning are moving a cat in and out of its cage (or into a new cage) or handling cats during cleaning. The concept of spot-cleaning was developed in order to decrease the effect of this kind of stress.

Spot cleaning is accomplished with the cat remaining in its housing unit while it is tidied, beds made, litter box maintained and any food and water removed and fresh supply provided. Actual cleaning only occurs as needed to remove organic materials from the surface areas. Spot cleaning helps reduce risk of disease transmission because cats are minimally handled during cleaning. Cats thrive on routine and familiarity and spot cleaning is a way to ensure that their environment is not heavily disturbed.

Spot cleaning protocols are available here :

<https://www.pinterest.com/pin/331225747572735094/>

<https://www.pinterest.com/pin/331225747572735106/>

<https://www.pinterest.com/pin/331225747572735120/>



We just described some of the basic principles of sanitation in animal shelters. Protocols are important to keep germ levels down, especially in community areas. However, never forget that despite the best protocol ever, you can still become a vector and unfortunately, carry germs around. You can turn yourself into a fomite (=any object or substance capable of carrying infectious organisms, and hence transferring them from one individual to another). Fortunately there are few things you can do to decrease the risk.

First : rationalize foot traffic. Everything you do should be performed in a very specific order that makes sense according to principles of disease resistance and immunity, starting with the animals whose immune systems are most vulnerable (for example, kittens and puppies) and ending with those animals who are most likely to be shedding viruses.

This is the “clean to dirty” principle and it should be applied to everything you do in shelters, from cleaning/disinfecting to simply walking into the structure.

Find out more about it in our blog here :

<http://royalcaninshelterprogram.ning.com/profiles/blogs/shelter-sanitation-apply-the-clean-to-dirty-principle>



We all agree, you don't want to turn yourself into a fomite, or at least do whatever you can to decrease the risk of spreading germs in the environment.

Germs can be spread by three main ways :

- feet : Sure that if you spend your day running across the shelter, there is always a risk some of those deadly pathogens we mention get stuck to your shoes and therefore carried around.

Alternatives exist to avoid such a thing : very often volunteers and regular shelter staff have a dedicated pair of shoes they only use to work at the shelter. It is especially important to protect your shoes when you work in at-risk sectors like the isolation room. In the past, foot-baths were used before entering those sectors but they are no more considered as the preferred option (see here <https://www.pinterest.com/pin/331225747572671070/>). A dedicated pair of shoes for this specific sectors or the use of cover-shoes are better alternatives to consider.

- clothes : A recent study showed that the worst fomites ever are apparently the scrubs we wear ! Their authors demonstrated that after petting 3 cats in an animal shelter, they could isolate approximately 67,000 units of contamination on the hands of the operators. When they did the same test on the scrubs of people in charge of cleaning after they performed the procedure, they could isolate 2,363.640 units of contamination ! Basic maths : you can pet around 54 cats to reach the same level of contamination! It definitely highlights the importance of protecting our clothes, especially when performing at-risk procedures like cleaning/disinfecting or working in the isolation area. Wearing a cover-all in these situations definitely sounds like the right alternative to go for !

- hands : obviously our hands can also carry germs. The study we just mention in the previous paragraph tells you that, in low-risk areas (like the adoption rooms, where you usually have the healthier animals), the risk of transmitting diseases by petting cats is relatively low (definitely lower than if they are in contact with a dirty scrub !). Precautions still need to be taken however, especially in higher risk areas like again the isolation. When working with sick cats, wearing single-use gloves is definitely a reasonable option to consider. Sometimes people want to disinfect their gloves between animals but remember that many disinfectants may take around 10 minutes to be fully efficient. Definitely easier to single-use them then !

#9

HAND-WASHING & HAND SANITIZERS :

| BOTH NEEDED |

Exception made of the isolation area, what other precautions should we be taking regarding our hands in the other sectors ? A question that always comes back concerns the use of hand sanitizers vs hand washing. What is the best alternative in animal shelters ?

A recent study performed on the hands of veterinary students revealed that this is definitely not what we think. The best results were obtained with the use of... hand sanitizers ! They turned out to be more effective to reduce bacterial count on the veterinary students' hands !

Keep in mind however that hand sanitizers are ethanol-based and will not kill the most common pathogens we find in animal shelters like the parvovirus, the calicivirus or ringworm. Moreover they act like a disinfectant. If your hands are heavily soiled, they will be totally inefficient!

Hand-washing is therefore still important ! It should be realized with a good hand soap to remove as much organic matter as possible. The mechanical action will be of great importance : rub your hands and count to ten (believe me it is definitely longer than what one might think !).

The question is therefore not : "should we choose between hand-washing and hand sanitizers ?"
Both are needed in animal shelters.

#10

SANITATION :

A | CONTINUOUS |

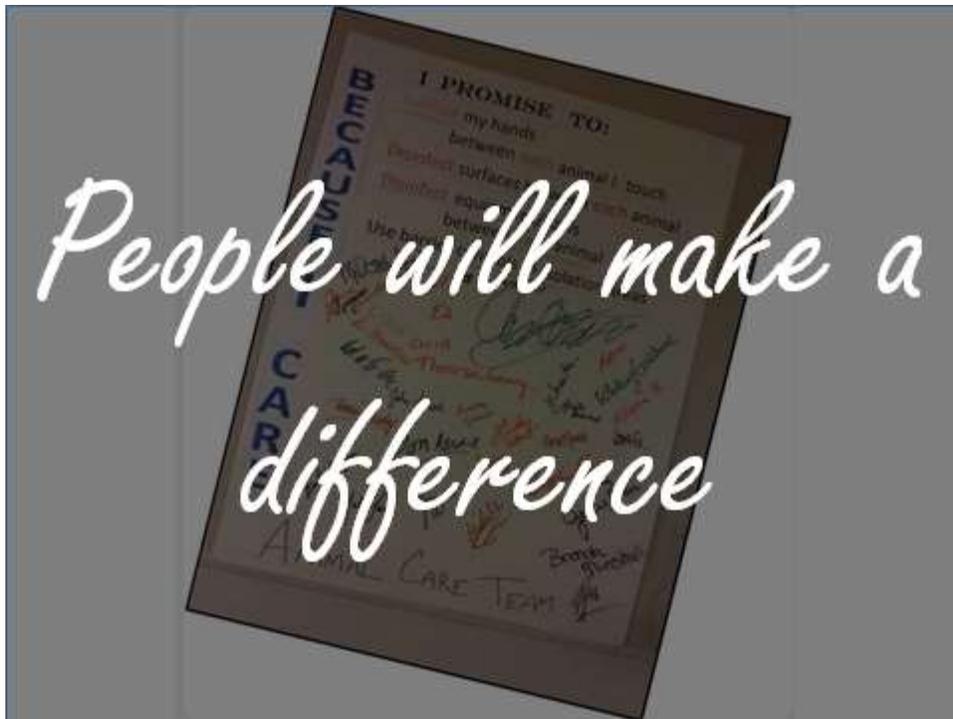
EFFORT

You now have a better understanding of the importance of basic sanitation measures inside an animal shelter and why protocols should be strictly followed. There is however one last thing to add to the discussion: when it comes to cleaning and disinfecting, you need to be consistent. ALWAYS.

This is a continuous effort that cannot stop during week-ends or holidays. If you do not follow the rules and overlook the importance of the sanitation protocols, even just a single day, in a structure like a shelter you can eventually end up in a red zone where outbreaks can occur.

If you are part of the cleaning crew, always strictly follow the guidelines you were given. Do not skip some of the steps. You now understand that there could be consequences. In a structure like a shelter, where the pressure of infectious diseases is so intense, what seems like a little mistake can sometimes take dramatic consequences.

Nobody like to scoop the poop, I understand that. But this is where you will make a real difference for those animals in your care.



I just walked you through some of the elementary concepts we use to build a sanitation protocol from scratch. You now understand how important it is and how you play a crucial role when you are involved in the sanitation process.

And I would like to end with this interesting story I found recently on Internet. A shelter whose volunteers and staff were failing to comply to their sanitation procedures decided to put out a signing board. Each staff member and volunteer had to sign a sheet to tell that they were committing to follow the written guidelines. And it worked, just by signing it boosted their engagement and they started doing a better job. An happy ending, thanks to a very simple measure that boosted people's motivation.

And do you know why this is so important ? Because when it comes to sanitation, at the end of the day, this is you, people, who will make the real difference.

Hope you enjoy the read, and don't hesitate to contact me if you have any question !

Thank you for your attention !



emmanuel.fontaine@royalcanin.com



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