

## Animal research facilities and COVID-19

In 2021, the Danish National Committee for the Protection of Animals used for Scientific Purposes decided to examine how the country's institutions (companies and universities with at least one animal research facility<sup>1</sup>) handled the COVID-19 pandemic.

The Committee formulated a questionnaire with 13 questions, which asked the facilities about the start of the pandemic and the lock-down period, as well as what they learned during this period of time that they and other facilities can use in the future. The questionnaire was sent to 47 animal welfare agencies and 36 of these responded (76%).

This report aims to highlight and discuss the most important aspects of the responses, including the various internal initiatives taken within some of these facilities that could be of use in other facilities in the future.

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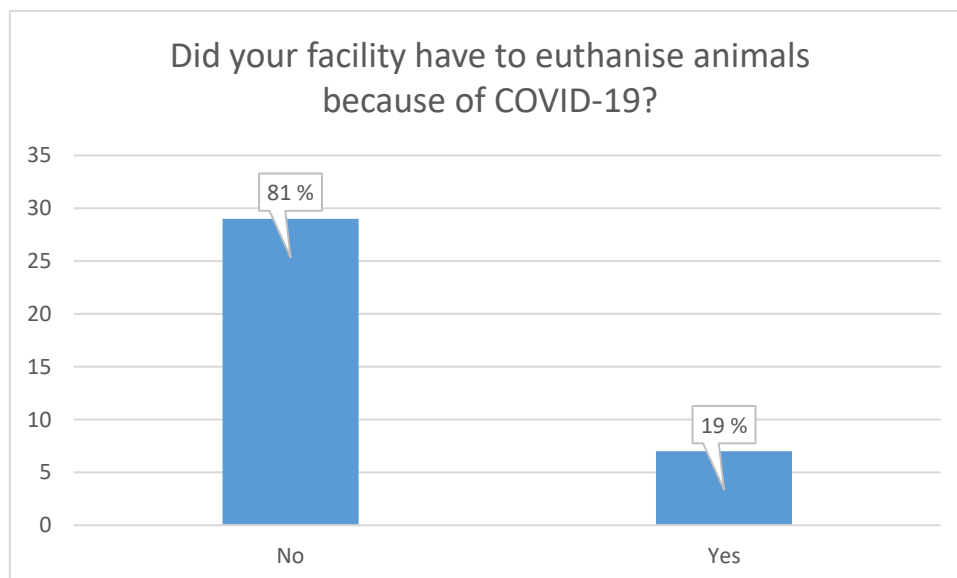
<sup>1</sup> The country's animal welfare agencies are not 100% associated with their respective facilities since some animal welfare agencies are associated with universities, places of teaching, breeding facilities, medicinal companies, etc. Similarly, the size of each individual facility varies. The influence of COVID-19 is therefore not entirely comparable between the different types of institutions.

## Part 1: The start of the pandemic

### Question 1: Did your facility have to euthanise animals because of COVID-19?

- Which criteria did your facility decide upon in order to decide if euthanasia was required?
- In your current opinion, was it the correct choice to euthanise animals?
- Could your facility have done anything differently to prevent the euthanasia of any animals due to COVID-19?

The majority of the facilities (29/36; 81%) chose not to euthanise animals due to the COVID-19 pandemic.



The rest of the facilities (7/36; 19%) chose to euthanise animals.

There were different reasons for choosing to euthanise animals:

- Three (3) facilities were unable to conduct specific experiments due to the restrictions
- One (1) facility was unable to deliver the bred animals to a specific recipient because the recipient was shut down
- One (1) facility was legally required to shut down and euthanise their animals (mink facility)

The remaining two (2) of the seven (7) facilities had the same reaction to the pandemic; they prioritised experiments according to their importance and how close the experiments were to completion. In some experiments, completion may result in the euthanasia of the research animals. One (1) of these institutions focused on preventing employee COVID-19 outbreaks that could result in no animal technicians being able to work and the subsequent euthanasia of animals that this could cause.

The other of these two (2) facilities assessed that the large majority of their experiments could be finished by adapting workflows and implementing precautionary health measures.

Only one (1) of the facilities that decided to euthanise animals because of the pandemic reported that this decision had been the incorrect one. This was due to the fact that the experiment was successfully conducted later on during the COVID-19 pandemic.

## Discussion

It is a positive thing that so few facilities were required and/or chose to euthanise research animals. However, future pandemics/crises can develop differently than the COVID-19 pandemic. Therefore, it is recommended that each facility and/or their animal welfare agency develops a plan for how each facility will handle similar situations in the future, especially if the situation causes the euthanasia of animals.

### **Question 2: Did your facility have to close down (completely or partially) and/or reduce the number of employees allowed to be present at the workplace as a result of COVID-19?**

- **Which factors contributed to this decision?**
- **In your opinion, was the decision to close down (completely or partially) the correct one?**

Only one (1) facility was closed down, and this was because the government decided to close the aforementioned facility. This decision resulted in the euthanasia of all the facility's animals because the experiment could not be completed due to the conditions and restrictions at the time. The decision to close down the facility was considered the correct one due to the lack of knowledge about COVID-19 at the beginning of the pandemic.

Half of the facilities (18/36; 50%) reduced the number of daily present employees in one way or another in order to minimize the risk of infection amongst employees to ensure the production could continue and the animals could be fed and cared for. Most of the facilities (10/18, 56%) chose to establish teams and restricted the physical contact between teams to minimize the risk of infection and ensure there were always healthy employees to take care of the animals.

One (1) facility also chose to establish a back-up team of animal technicians that could step in in case the two (2) existing rotating animal technician teams were infected with COVID-19.

The facilities agreed that the choice to reduce the number of employees that were daily present, either by establishing rotating teams or through a general reduction in the number of employees allowed to be at the facility at the same time, was the right one.

The remaining half (18/36; 50%) of the facilities reported that they did not close down (completely or partially) or reduced the number of daily employees. It is unknown what the reason(s) for this decision were because the questionnaire did not ask the facilities to specify their answer. However, it can be assumed that these facilities followed the governmental guidelines that they considered to be necessary.

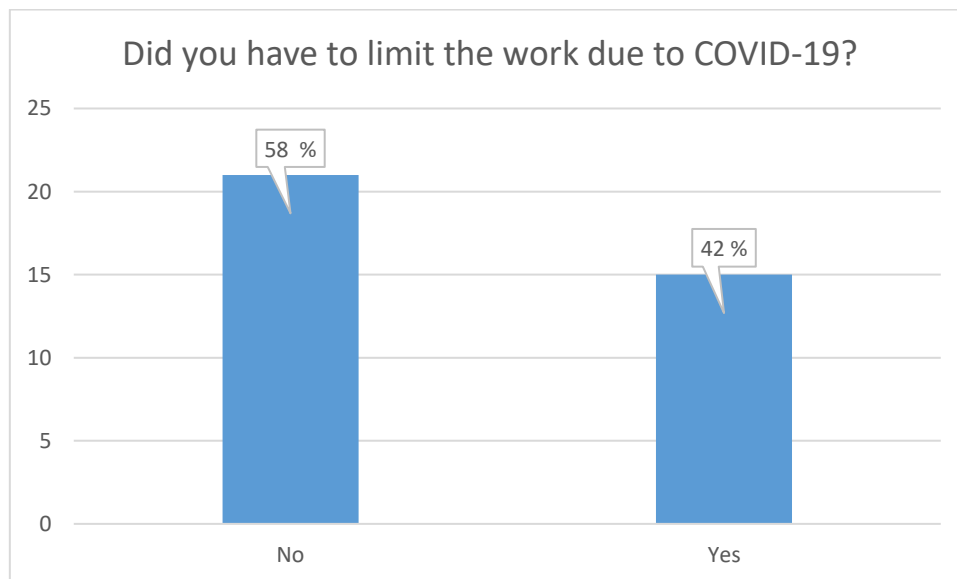
## Discussion

Since half of the facilities did not find it necessary to reduce the number of daily employees, it would be worthwhile to discuss with the animal welfare agencies why it would benefit them to reduce the number of employees or establish teams in similar crises in the future.

### Question 3: Did you have to limit the work due to COVID-19?

- **What factors contributed to this decision?**
- **In your opinion, was the decision to limit the work the right one?**

The majority of facilities (21/36; 58%) did not find it necessary to limit the work as the result of COVID-19. Various initiatives at these facilities, such as the establishment of rotating teams, probably contributed to the facilities being able to carry out their planned work.



The remaining facilities (15/36; 42%) reported that they limited the work in various degrees.

Several of these facilities justified limiting their work due to the reduced risk of infection amongst the employees because of the limitation. One example of this limitation was not conducting a specific experiment because it required the presence of too many people in the same room or because it was not possible due to the rotating teams. In the beginning of the pandemic, one (1)

facility also decided to keep up with the daily care of the animals but delay the large cleaning of the animal stalls.

Other facilities justified limiting their work due to more indirect consequences as opposed to the more direct consequences mentioned in the above paragraph. An example of this was the absence of students due to cancelled classes. One (1) facility also noted that the work was involuntarily limited due to fewer transportation options to and from facility and customers.

## Discussion

We observed that there were two (2) main reasons for facilities limiting their work: due to consideration of their employees and attempts to minimize the risk of infection for their employees and the more indirect reasons, such as restrictions and conditions that the facilities had no control over.

It is recommended that the facilities that chose to limit work in order to help reduce the risk of infection, instead allows themselves be inspired by the facilities that chose to establish rotating teams thus limiting physical contact and the risk of infection. This would allow projects or activities that require a certain number of employees and/or close contact to be conducted and not compromise the animal's welfare or the work done at the facilities.

### **Question 4: How did you keep the employees informed about decisions regarding the above (questions 1-3)?**

The aim of this question was for the Danish National Committee for the Protection of Animals used for Scientific Purposes to obtain knowledge about how the facilities had chosen to defend their decisions about animal euthanasia, as well as employee reductions and limitations, to their employees. However, according to the responses, it seems that most responders understood the question differently and instead explained how things were communicated (i.e. method of communication) to the employees.

In these responses, it was observed that online meeting platforms (Skype, Zoom, Teams, etc.) were regularly used to communicate within the facilities and was therefore particularly useful during the COVID-19 pandemic where it is not recommended to meet in-person.

### **Question 5: How was it decided which animal experiments could be conducted during the lock-down period and which could not?**

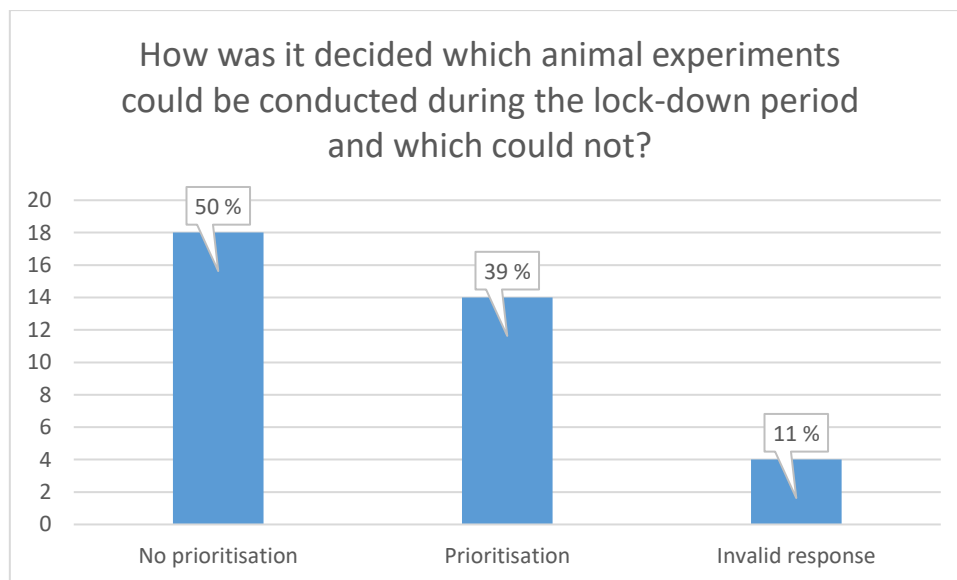
Half of the facilities (18/36; 50%) expressed that there was no particular reasoning or prioritisation behind these decisions. No explanation is given for this.

Of this half, half of the facilities (9/18; 50%) reported that all experiments were conducted and therefore, no prioritisation was made. In these facilities, it was decided that the experiments could

be conducted under the conditions at the time. Some explained that this included changed work routines and arranging the work differently and/or using a larger portion of the day to finish the work tasks. One (1) facility reported that they were a small facility that was vaccinated early due to being part of the Danish Health Authority and that enabled them to be able to conduct all their experiments.

A third of the responses (6/18; 33%) reported it was not necessary to prioritise the experiments since no animal experiments were conducted during the lock-down period.

The remaining three (3) facilities (3/18; 17%) did not give a reason for not prioritising their experiments.



In fourteen (14) of the responses (14/36; 39%) it was reported that some kind of prioritisation did take place. In several instances, these prioritisations overlapped, but most of the facilities (11/14; 79%) reported that the experiments that had already been started or were important/critical were highly prioritized. Not all facilities explained what determined if an experiment was important and/or critical.

One (1) facility reported that COVID-19 related experiments were highly prioritised, and another facility explained that experiments that the facility was contractually obligated to conduct were prioritized. One (1) facility answered that each experiment was assessed and prioritised after how close it was to completion. Additionally, the experiments were categorised into three (3) categories according to importance in case the animal technicians became sick.

Three (3) of the questionnaires (3/14; 21%) expressed that, in addition to the prioritisations mentioned above, experiments were also prioritised according to which experiments could be conducted with the regulations in place at the time.

The remaining questionnaires (4/36; 11%) were registered as invalid responses. These facilities reported who was responsible for deciding the prioritisation, which is of no interest in this report.

## Discussion

Different parameters were used to determine the prioritisation of the experiments amongst the facilities that deemed it necessary to prioritise the experiments. Some of parameters taken into consideration in the decision-making included contractual obligations, length of the experiment, and societal conditions.

All facilities should strive to categorise and prioritise experiments during similar situations in the future.

## **Question 6: Did your facility experience difficulty obtaining feed, enrichment, etc.? If yes, what?**

The majority of facilities (27/36; 11%) did not experience any difficulty obtaining items needed to ensure animal welfare.

However, some facilities (5/36; 14%) experienced problems obtaining protective gear (such as facemasks, one-use gloves, one-use suits, and sanitisers).

The remaining facilities (4/36; 11%) reported that they experienced delivery problems. One (1) facility reported that enrichment items took longer than usual to be delivered, while another facility reported bedding and irradiated cage material delays. A third facility reported delays with irradiation, and a fourth reported delays with medicine and operation equipment deliveries.

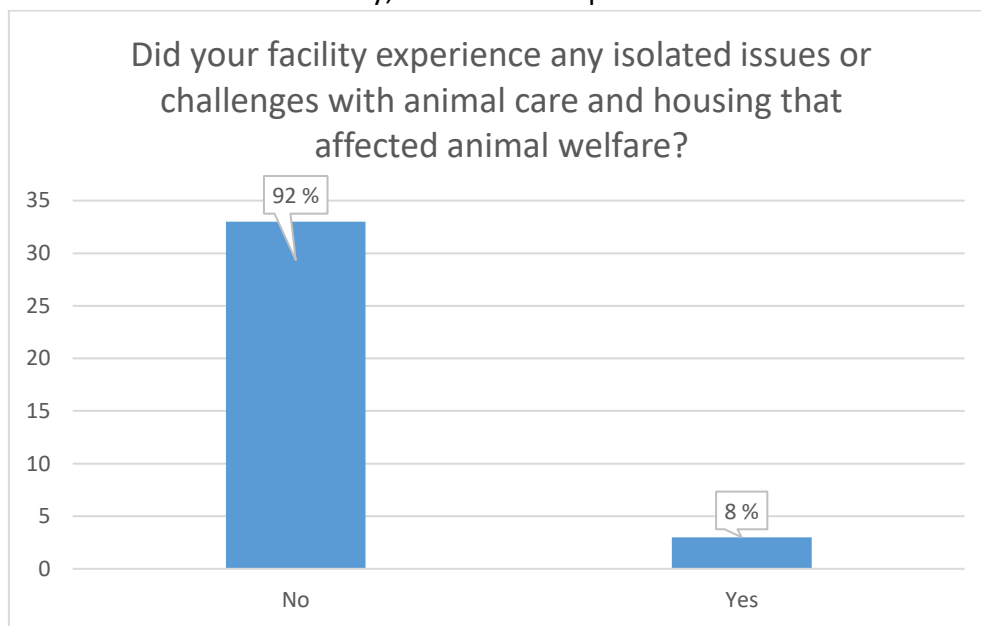
## Discussion

Fortunately, it seems that a majority of the facilities did not have trouble receiving supplies, and only a few facilities had problems with receiving animal-related supplies.

The lack of protective equipment was not an isolated problem for research animal facilities. This lack seemed to be a general problem that affected many different sectors during this period.

### Question 7: Did your facility experience any isolated issues or challenges with animal care and housing that affected animal welfare? If so, which challenges?

Almost no facilities (33/36; 92%) experienced any isolated issues or challenges that affected animal care and housing challenges. One facility noted that they were without animal technicians for a short period of time because one of their animal technicians was in isolation due to having been in close contact with an infected and their other animal technician was on vacation. Therefore, the facility had to create an emergency plan, which included researchers stepping in to take care of the animals. But fortunately, this did not impact the welfare of the animals.



Only three (3) facilities (3/36; 8%) reported that they had isolated challenges related to the care and housing of animals. One (1) facility explained that they had to use less animal bedding than usual for a short period. Another facility noted that some practical experiments had to be cancelled because the students were sent home, and this resulted in the dogs needing more exercise. The third facility reported that they ended up genotyping some of their mice pups later in life instead of when they were weaned.

### Discussion

Fortunately, most of the animal care and housing challenges that the facilities experienced ended up not affecting the welfare of the animals in a significant way. One (1) facility experienced that they had to reduce the amount of animal bedding they used, which can be assumed to have had a small impact on animal welfare.

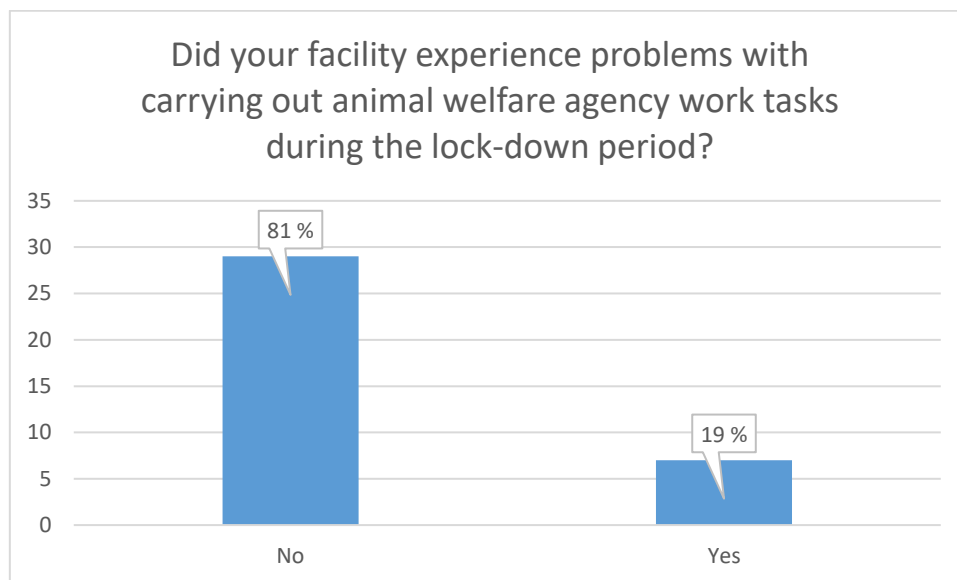
Some of the facilities had to come up with alternative solutions to solve their animal care and housing problems, and fortunately, these solutions seem to have worked. This knowledge can be shared with other institutions during similar crises in the future.



## Part 2: The lock-down period

### Question 8: Did your facility experience problems with carrying out animal welfare agency work tasks during the lock-down period? If so, which?

Most of the facilities (29/36; 81%) responded that they did not experience problems carrying out animal welfare agency work tasks during the lock-down period. Out of these twenty-nine (29) facilities, seven (7) (7/29; 24%) elaborated their answer and explained that they chose to hold their animal welfare agency meetings online.



The remaining facilities (7/36; 19%) responded that they did have problems carrying out animal welfare agency work tasks. Two (2) facilities chose to not to hold animal welfare agency meetings during the lock-down period, while two (2) other facilities chose to hold fewer meetings during this time. In order to reduce the risk of infection, two (2) facilities chose to not inspect animal housing and experiments/models. One (1) facility expressed that they had some more specific problems related to the animal welfare agency. This facility had recently re-established their animal welfare agency and therefore, their agency included persons that had not previously worked with research animal welfare. Furthermore, not all members of the agency could speak Danish which was a problem during online discussions, and therefore, the facility chose to reduce the number of meetings since they deemed the meetings were unproductive.

### Discussion

It is fortunate that most facilities were able to carry out the animal welfare agency work tasks despite the challenges brought on by the lock-down period.

The responses from the facilities that experienced challenges were unambiguous. However, it is worth noting that two (2) facilities expressed that online discussions were sometimes difficult – especially when there were a lot of members or language barriers amongst the members. Discussions are an important part of animal welfare agency meetings and therefore they should continue to take place during future crisis situations.

If a facility's animal welfare agency inspects animal housing and experiments/models, then it should be discussed how this work task can be continued in a similar crisis-situation in the future.

### **Question 9: What changes did the facility make in order to protect animal technician safety and well-being?**

The majority of the facilities (31/36; 86%) clearly expressed that they felt a high degree of responsibility for not only their animal technicians but also for the rest of their employees in terms of their safety and well-being. Therefore, many of them chose to follow government guidelines and some also took further action(s) to prevent infection transmission. Some of these actions were not direct guidelines from the government (these guidelines included distance requirements, hand sanitization, isolation, use of masks, etc.) and included the following:

- Establishing shift teams
- Working longer hours so the work could be staggered to a greater extent
- Flexible meeting times (dispensation for amount of time worked)
- Animal technicians had more freedom to plan their own workday (shorter work days, meeting later, etc.) so they could avoid public transportation during peak hours
- Only animal technicians were allowed in animal housing
- Optimised changing and shower/bathroom facilities
- Optimised lunch-plan (lunch given out in take-away boxes instead of plates)
- More often cleaning of facilities
- Administrative personnel sent home to work
- Frequent COVID-19 testing for those who were not sent home
- Online meetings instead of in-person meetings
- Continuous follow-ups on the well-being of animal technicians from management

Additionally, a number of respondents also noted that there was an increased level of communication during the crisis, which allowed the employees to always be aware of the facility's situation.

It is also worth noting that one (1) facility offered to buy fitness equipment for their employees that worked from home so they could workout at home and increase their well-being.

It is unknown what changes the rest of the facilities (5/36; 14%) made to their daily routines in order to ensure the well-being and safety of the animal technicians and other employees. However, this does not necessarily mean that they made no changes.

One (1) facility answered that they had “no deviation from normal” – meaning that they made no changes. This may have been enough to protect the employees. Another facility answered the question by writing that they had an “even flow of information”. Another responded that they did not focus on protecting the safety and well-being of animal technician staff because the facility was shut down. Finally, one facility simply answered the question with “emergency staff plan”, while another answered “cannot be answered”.

## Discussion

It seems relevant to note that several facilities/animal welfare agencies mentioned that some of the changes could be implemented into every day routine and not just in a pandemic or other crisis situation.

## **Question 10: How did the facility respond to animal technician worry about animal welfare?**

The majority of facilities (32/36; 89%) expressed that their animal technician staff did not have animal welfare worries that were directly related to or caused by the COVID-19 situation. A couple of facilities noted that their animal technicians have always been able to express their worry about animal care and welfare. One (1) facility even had a mailbox where employees can anonymously voice their concerns. Another facility expressed that they always listen, even when not in a lockdown, to animal technician concerns about animal welfare.

Three (3) facilities (3/36; 8%) answered the question by mentioning the changes that they made to ease the worry of the animal technicians. At one (1) facility, each employee was assigned a certain number of animals to care for in order to ensure a high degree of animal welfare. Another facility chose to refrain from ordering new animals and expressed that they decided to euthanise animals if they ever experienced a lack of food or the animals could not be taken care of by animal technicians. A third facility wrote that all concerns about animal welfare were discussed by the animal technicians and daily manager and were taken seriously.

One (1) facility seems to have misunderstood the question. Presumably they understood the question as relating to animal technician welfare instead of animal welfare, since they answered that they “listened and allowed the technicians to work at home as much as possible”.

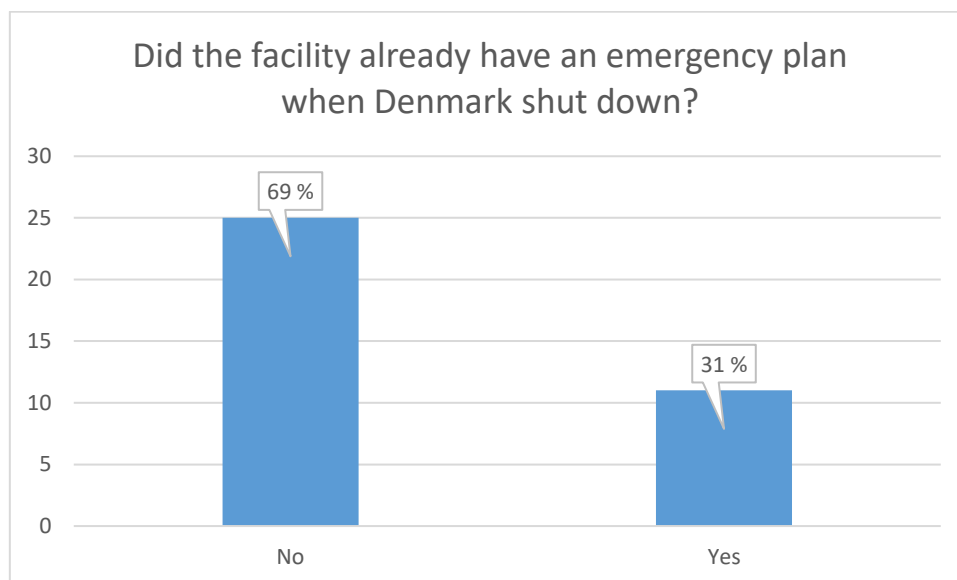
## Discussion

It is recommended to encourage all facilities to promote a continuous and open dialogue between the management and animal technicians, so that the animal technicians feel that it is worth

coming to management with their concerns. This will not only benefit the animals but also the well-being of the animal technicians because they will feel that they are being listened to and that their expertise is respected.

**Question 11: Did the facility already have an emergency plan when Denmark shut down (March 11<sup>th</sup>, 2020). If yes, did it work? If no, do you have an emergency plan now?**

Most facilities (25/36; 69%) answered that they did not have an emergency plan in place when the pandemic hit Denmark and the country entered a lock-down. Almost all of these facilities also noted that their lack of emergency plan did not turn out to be a problem, since the facilities were able to come up with a plan as time went on. However, one (1) facility did express that they were frustrated over the uncertainty of the COVID-19 situation by writing that they “had no idea how the situation would unfold”. Due to this frustration, the facility decided to develop an emergency plan that can be used in similar crisis situations in the future.



The remaining facilities (11/36; 31%) answered that they, in one way or another, had an emergency plan ready. Six (6) of these facilities (6/11; 55%) refer to generic contingency or emergency plans. The remaining five (5) facilities (5/11; 45%) answered very clearly that they had an emergency plan ready. One (1) facility answered simply “yes” to the question, while the rest of the respondents explained their answer in more detail. One (1) of latter facilities said that they did have an emergency plan but that it did not work as expected, and therefore, they have added infection detection and testing guidelines to their emergency plan. In contrast, one (1) facility answered that their emergency plan worked, and it resulted in the work tasks being split up over a 24-hour period.

One (1) facility wrote that they had a “disaster plan” whose application has since been discussed in case of an epidemic.

One (1) facility answered “Prior to March 11<sup>th</sup> we had developed a plan of how the animal stalls should be run during a lock-down. A meeting was planned for March 12<sup>th</sup> shortly after the Prime Minister’s speech on the evening of March 11<sup>th</sup>. This meeting was held March 12<sup>th</sup> at 12 PM where the emergency plan was shared and came into force shortly after”.

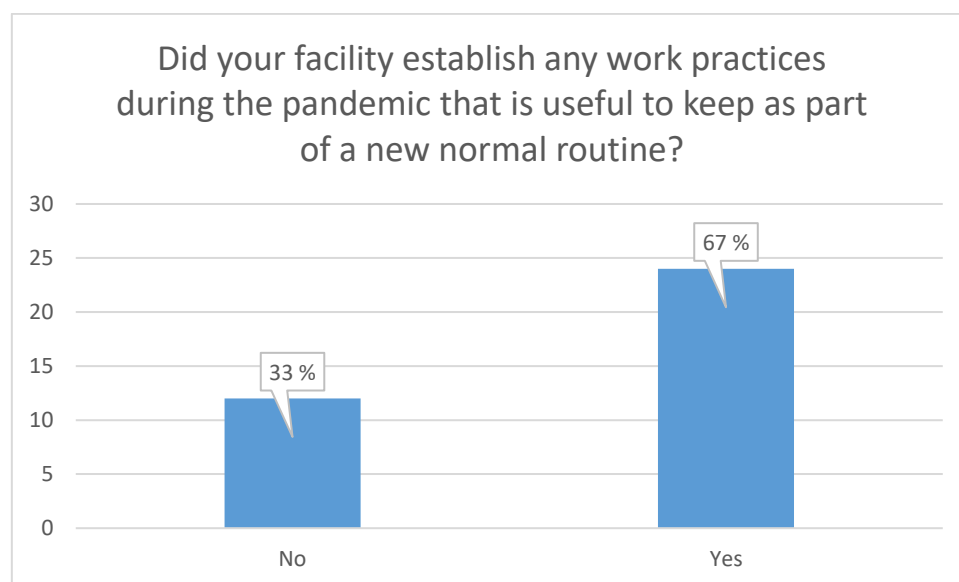
### Discussion

It is recommended that each facility should, with their COVID-10 experience in mind, discuss how their emergency plan can be updated or how they can establish an emergency plan.

### Part 3: Lessons for the future

#### **Question 12: Did your facility establish any work practices during the pandemic that is useful to keep as part of a new normal routine? If yes, which practices?**

A third (12/36; 33%) of the facilities answered that no new work practices were established, and two (2) of these facilities further elaborated on their answer. One (1) facility explained that they were not very affected by the situation. The other facility stated “No because we have different animal stalls with different animal species and disease statuses, which means that we are already very aware of our work practices. This has not changed under corona and vi have not had any animal technicians that have been sick with corona”.



The rest of the facilities (24/36; 67%) expressed that they had to establish new work practices in one way or another. In many cases, these new work practices concerned new hygienic measures that the facilities chose to keep after the lock-down. Similarly, many facilities also decided to work

more from home and hold more online meetings. Twenty-two (22) of these facilities (22/24; 92%) mentioned new hygienic measures or an increase of working from home and online meetings – or a combination of the two.

## Discussion

It is apparent that many facilities have gained knowledge during the COVID-19 pandemic that has resulted in permanent changes being made in the facilities. There is no doubt that hygienic improvements and an increased use of working from home and online meetings will not only result in less sick days but will also streamline some work tasks and result in an increase of temporal resources.

### **Question 13: Did the employees experience that they received sufficient information?**

Most facilities (26/36; 72%) expressed that the employees received sufficient information.

The rest of the facilities (10/26; 28%) responded that the employees received insufficient information but at different levels. These answers are not categorizable since a wide range of different issues were expressed. However, some facilities expressed that most of the insufficient information come from the government and not from the facilities.

## Discussion

It is positive that most of the employees at the different facilities feel that they received sufficient information during the crisis. It is vital that each employee feels that they are given enough information or else this may cause insecurity.

The COVID-19 situation naturally came with a lot of uncertainty, especially the government. This uncertainty has made internal facility communication more difficult to a certain degree.

## Conclusion

The consequences of COVID-19 have been predominantly negative. However, our society – and thus the experimental animal facilities- have gained experience handling a crisis, which can be useful for the individual facilities in the future.

Another important point of this study was that the facilities not only gained experience in handling a crisis, but that the crisis also caused the facilities to assess how their work practices and routines can be approached differently. This was expressed by 67% of the questionnaire responses (Question 12) who found that new work practices enacted during the crisis were continued after.

A list of the different crisis and daily improvements can be seen below, which can be used as inspiration for the facilities and animal welfare agencies.

NB. Be aware that some of the improvements/actions are listed under both categories.

#### Crisis improvements

- Establishing different shift teams
- Possibility of working a larger part of the day so the work can be staggered throughout the day
- Flexible meeting times (dispensation for working hours)
- Allowing animal technicians to choose their own working hours (shorter working days; meeting later so public transport during peak hours can be avoided)
- Only animal technicians allowed in animal stalls
- Optimized changing and bathing facilities
- Optimized lunch conditions (for example: individually sized portions given out)
- Frequent facility cleaning
- Administrative personnel work from home
- Frequent testing when working in-person at the facility
- Online meetings instead of physical meetings
- Continuous follow-ups from management on animal technician well-being
- Increase communication effort so employees are informed about the facility's situation
- More working from home
- Increases use of sanitization sprays
- Increases use of masks

#### Daily improvements

- Optimized changing and bathing facilities
- Online meetings instead of physical meetings
- Continuous follow-ups from management on animal technician well-being
- Increases communication effort so employees are informed about the facility's situation
- More working from home
- Increased use of sanitization sprays
- Increased use of masks
- Continuous follow-ups from management with animal technicians regarding animal welfare
- Establishing a or updating the current emergency plan