



Maddie's Institute

Fixing the Feline Housing Crisis: How Shelter Housing Can Make Cats Sick - And What You Can Do About It

Webcast Transcript

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[Beginning of Audio]

Alison Gibson: Well, good evening everyone. I'm Alison Gibson, communications specialist for Maddie's Fund[®]. And I want to thank you all for joining us tonight. Tonight's webcast, *Fixing the Feline Housing Crisis: How Shelter Housing Can Make Cats Sick - And What You Can Do About It*, is being presented by Dr. Sandra Newbury of the Koret Shelter Medicine Program at UC Davis. Dr. Newbury is also the chair of the Shelter Standards Task Force of the Association of Shelter Veterinarians, and she's adjunct assistant professor of shelter medicine in the Department of Pathobiology at the University of Wisconsin, Madison School of Veterinary Medicine.

Well, we'll be starting in just a few moments. But before we do, we have some housekeeping items to go over. First, we'll be drawing ten names of those of you attending tonight in a chance to win one of ten copies of Maddie's *Animal Shelter Infection Control Manual*. Next, please take a look down at the left-hand side of your screen where you can see a Q&A window. That's where you can ask questions during the presentation, and Dr. Newbury will answer as many of your questions as she can at the end of the presentation.

But please don't hold your questions until then. Feel free to ask them at any time. And if you need any help with your connection during the Webcast, you can click the Help icon. That's displayed as a question mark at the bottom of your screen. Or you can go to event.on24.com/view/help. Now, along with that Help button, you'll see other little images at the bottom of your screen. These are widgets that will take you to additional resources that Dr. Newbury and Maddie's Institute want to share with you.

Now, these resources will also be available immediately after this presentation on our website, but be sure and check them out. Oh, and, by the way, you can move all those widgets around too, however you want to arrange them on your screen. Now, before I turn the mike over to Dr. Newbury, I wanted to say a few words about Maddie's Fund. You may know that it's the leading funder of shelter medicine education in the

United States, and it's our goal to save the lives of all of our nation's healthy and treatable shelter dogs and cats.

We got our inspiration for that goal from the unconditional love of a little dog named Maddie. Her example led Dave and Sheryl Duffield to promise her that they would honor that love by founding Maddie's Fund and by making this country a safe and loving place for all of her kind. And it's our hope that you, too, will be inspired by Maddie, to take what you learned here tonight and make that promise come true. Well, Dr. Newbury, thank you for being here with us.

Dr. Newbury:

Thank you, Alison, and welcome everybody. This is a lovely evening here. I'm actually in Wisconsin and getting to talk about one of my favorite topics, shelter housing for cats, especially. And so even though we titled the presentation, *Fixing the Feline Housing Crisis*, I'm going to give it a new title for tonight, and we're going to talk about a fine house and how shelter housing can help cats stay well because we want to have it have that kind of a positive view on things.

And so the reverse of that kind of positive view that we're really going to talk about tonight, we're going to give this – really look at how we can use housing to keep animals well. At the same time, I do want you to really realize and to think about that shelter housing can really make cats sick. So that's the reason we need to think so much about making them well, and that this is really sort of the – what epitomizes it for me.

I took this picture when I was on a shelter consultation, and I thought to myself, "How often do we ever see an animal who's in a comfortable and stress-free environment where they can make their own choices, make a choice like we see this making where he's facing the wall, not interacting with anyone and, really, sort of – we can't know exactly what he's thinking, but we can – this picture, to me, sort of epitomizes the reasons that we need to think about this. Because not only can shelter housing make animals sick, but it can make them emotionally or behaviorally sick as well.

So I just wanted to kind of start out with that in mind; and with that in mind, what we're going to do is talking about we can use housing, really, to keep them well. I wanted to start out with a poll, really, right at the beginning to find out where you guys are in terms of the housing that's either your shelter, and please know that I'm saying "shelter," I'm throwing a really wide net, and I mean almost that you can think of where animals are being housed to – hopefully, for re-homing or even a sanctuary, and even foster care, if that's what you're doing.

Alison Gibson:

Well, thanks, Sandra. You can see there's a poll up there, and please make your selection and submit your answer. I'll read it out here while we're doing that. "How do you feel about the housing forecast in your shelter? I want to stay there. Needs some improvement. Needs much improvement. Longing for a wrecking ball." Or, "This isn't applicable to my situation." So go ahead and submit your responses and we'll get your results in just a minute. Looks like a lot of people are going on answering right now. And Sandra will click on the results as soon as we see a majority of you have responded.

Dr. Newbury:

Looks like we actually had a lot of early answers because I saw that in the preview; I saw that moving pretty quickly. So that's really nice to see, and thanks for your responses. Not unsurprising to me, but kind of sad, right, for shelter cats, in general, that we only had 1 percent who really want to stay there. Happy – I'm happy to hear that some of you only feel like you need some improvement; 36 percent needs much improvement, and, also, not surprising to see that almost 20 percent are longing for the wrecking ball.

And I know I've talked and worked with many shelters who are in that same position and, hopefully, you'll get your redesign. And I'm hoping that, from tonight's talk, you'll even get some ideas for how you can redesign without the wrecking ball. So, hopefully, we can get there. When we start thinking about housing and URI, I wanted to make sure that we cover it right from the beginning. I'm hoping many of you saw Dr. Hurley's presentation on upper respiratory infections in cats.

And so I'm guessing that you all have a pretty good background on the correlation between URI and housing. So I won't go into that too much, other than to say we're pretty aware that herpesvirus infections make up the large majority of what we see as respiratory infections in cats. And even some of the infections that we see that may be caused of the secondary invaders, herpesvirus probably underlies many of those as well.

And so we know that so many cats, the vast majority of cats, arrive at shelters already infected with herpesvirus. And, really, all we need to do is put them under stress and that virus will come out. And so because of those correlations, it makes housing for shelter cats especially important because of those –because of the connection between housing and stress, and the connection between stress and respiratory disease.

So please, if you have questions about that, go back to Kate's webinar because that's a wonderful presentation covering all sorts of aspects about respiratory disease. And this something, again, that she talked about in her webinar, and I have it here just kind of as a reminder that when we're

talking about housing, we want to think about housing that's preventative housing, and we're going to talk a lot about preventative housing tonight.

But we also want to think about housing for recovery as well, and so this is something, actually, from Oprah Winfrey's website where she talks about many, many studies that were – that have been sort of compiled and put together to show how important a room is in terms of recovering from events. And they actually point out various things like the importance of sunlight, the importance of fresh and clean air, the importance of facets of a room that even just make people stay and visit with you a little bit longer.

And I think these are things that we're going to come back to as we're talking about housing for cats tonight. The importance of ease of providing treatment; all of those things are very important and we'll come back and talk about them as we go. I wanted to make you guys aware of a few resources, and one of my favorites is our new Pinterest site, so UC Davis Shelter Medicine Pinterest Site.

And many of the pictures that you're going to see tonight are things that we posted on our Pinterest site because we love it, but also because we wanted to get prepared for tonight's webinar. And what you'll see when you get there is you'll see the picture. And then underneath the picture it'll tell you what we love and what we wish we could see added. In some cases, there won't be much. We'll just tell you why we loved it. And, in some cases, we might show you a picture and there's just one little part of it that we love and other things we wish would change.

But this is a really live site for us, and whenever we find something new we'll put it up here. So it's a good thing to follow if you're interested in following Pinterest. And, if not, just to check in kind of frequently because we'll put things up there to try to share them with you. The other thing I wanted to kind of set our stage with is the five freedoms. And for any of you who have seen the ASC Guidelines for Standards of Care, this is what we used as kind of the bar that we set everything else against.

And so what we felt was that these five statements really summed up the needs of animals in a very compelling way, that we couldn't – that there was no way that we could tell – well, you don't really need that. And so when we look at these and we say, well, freedom from hunger and thirst by ready access to fresh water and diet to maintain house and vigor, we want to make sure that's kind of in the category.

If we looked at the ASC Guidelines and we look in the housing section, we want to say, "Well, yeah, that's a must. We want to make sure that that's provided." Freedom from discomfort. Again, we want to make sure

that's provided by providing an appropriate environment, including shelter and comfortable resting area. We're going to come back and talk a lot about that tonight.

Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment. Freedom to express normal behavior by providing sufficient space, proper facilities and company of the animal's own kind, and freedom from fear and distress. We want to make sure that each of these freedoms is provided for in the housing that we provide for cats.

So my last kind of stage-setting thing that I want to show you here, is a series of images that I put together that really makes me happy, number one, and number two, really makes me think about what cats need, by thinking about what cats do if we allow them to make their own choices. And so this is my cat, Clarkie, who was, I think, the master of stress reduction, both in assisting other people to reduce their stress and reducing his own stress. And this is him outside on our balcony.

Here's Dr. Hurley's cat. She named him Foss so she could say that she never failed at having a foster cat. And he's not stuck in this tree. This was a daily activity for him and I took his picture when I was visiting once. And I think if we really think about a cat like this and what he does when he makes his own choices, and then we imagine taking him and putting him into a small, maybe stainless steel cage in a shelter, we need to recognize what I usually say about this is, I don't know whose idea it was to store cats in small metal boxes, but I can tell you for sure it was not a cat.

And this is actually a picture of my son playing violin in a sort of similar way to Foss the cat. And the reason that I have this here is that when I was young, I was taught that you can't make comparisons. You can't do that anthropomorphic comparison between what a human wants to do and what an animal wants to do. And I think, though, that we can often actually get a really great perspective on housing by trying to imagine what we would feel like if our ability to choose was limited.

And so that's the reason that that's there is to really understand that we like making our own choices in the way we move through our environment just like cats do. And sometimes I think that really helps us get a great perspective. This is a picture that I took at Best Friends, and this cat, I think, for me, is one of my favorite kind of poster kitties for feline enrichment because what he likes to do all day and sit in this box and wait until someone's coming by, and then he ducks his head down and he gets to watch them go by upside down.

It would be really hard to know, in advance, that that's what he wanted to do, but if we enrich rooms enough and provide enough opportunity for animals to make choices and come up with their own and creative ways of entertaining themselves, then we provide the right kind of housing experience for them. We also want to make sure we allow opportunities for them to explore in safe way.

And, yes, this kitty really is this big. But we want to provide – in some cases, for some cats the right answer may be to use a harness and learn to go outside, or it may be to just provide environments where they have the opportunity to explore and to get out and stretch their legs and do things like that. We also want to remember what animals do when they get to interact with each other and how important those interactions are to them. And so we really want to kind of keep all these things in mind.

This picture I love because it really – when I look at the way this cat is holding his body, I can to myself, "Wow, that cat's body is really in the position that his body wants to be." There's not much inhibiting his body, other than the fact that he looks like he's out and wants whatever it is he sees on the side of that gate, and he's in. And so when we look at the curve of his spine, when we look at how relaxed his legs are, how relaxed his hair is, this is really what we want to see.

And we'll talk more about this when we're trying to make what I call kind of an outcomes-based assessment of housing, that when we see an animal in the housing looking like this, we should start to feel pretty good about what we're seeing. So when we think about enrichment, what we want to always think about – and what I hear shelters talking about all the time – is this sort of conundrum of trying to balance protection from infection disease with enrichment. And that is a very important thing to do, and we'll talk about that throughout the evening.

But it's very important to realize that both sort of ends of this can be dangerous, but if we provide perfect infection disease protection without appropriate enrichment, that that can be just as dangerous, especially for young animals, as going the other way where we provide lots of enrichment and little control for infectious disease protection. So this is one of the kind of key pieces that we need to always keep in mind when we're thinking about housing and we design the programs that work with our housing.

So I wanted to have you think, for a minute, about, "Well, why don't we have dream housing for cats in shelters?" And I think about that a lot, and this is where I say, "I know it certainly wasn't this cat who thought the best idea for him would be to live in this cage."

And we can think about cats and the way we know that immune systems work, and we can understand how a very fastidious cat likely doesn't want to sit next to his litter box all day, likely doesn't want to eat his dinner in the bathroom every day, and understand how this is probably a very, very stressful situation for this cat.

And, yet, somebody designed cat housing this way, and they designed cat housing this way as well. And so we really want to talk – let's really think about for a little while what it is that makes it so that we don't have, in many cases, the kind of housing that we'd like to have. And so here's our next poll.

Alison Gibson:

Yeah, it looks like we have another poll question. And the poll question that we want to ask, "What gets in the way of dream housing for your cats? (A) Not enough money; (B) not enough space; (C) worries about infectious disease; (D) both A and B; (E) something else, or (F) not applicable."

And while you're making your selection, I'd like to remind everybody and encourage everybody to go ahead and ask your question. You'll see the Q&A window on the left-hand side of your screen and we welcome any and all. So we're tabulating those results, and Sandra will go ahead and comment on them as soon as you've made your selection and hit the Submit button.

Dr. Newbury:

Okay. Well, it looks like, not surprisingly, that we have a pretty good mix; 72 percent said not enough money and not enough space. And so that isn't surprising me at all. And so that's why I made this slide because, really, I think that is the reason in many cases, is that what we're trying to do is we're trying to balance requirements for capacity for how many animals we can fit into a space with enough space for each individual.

And so if we think about this kind of balance scale you're seeing here, we have to think about, well, then as the need for numbers goes up, the space that we think about that we can give to each individual animal really drops. And so this is where population management comes in and it's very, very important to think about the way you plan on moving animals through the shelter. And there's many presentations and written materials that you can look at about this.

But one of the really key factors here and something Dr. Hurley talked about, is that as you are able to increase the efficiency of the way animals move through your shelter and decrease the average length of stay so the animals are moving towards adoption more quickly, that what you find is that you can actually provide animals a little bit more safe, and in some

cases, really, a lot more safe. And so we'll talk about what you can do, once you get to that point, a little bit later on.

This slide is really to kind of summarize what really matters, and there's a lot of things on this list. And the truth is, I think that if we look through and we think about, well, quantity of space, the quality of the space, the separation for rest and food and elimination. All of these things are really incredibly important. And I'm going to go through and talk about each one of these. Because the truth is, if we look at any of these and have any of them neglected from our housing plan, that we may run into some trouble.

So let's start out by talking a little bit about appearances. This is a brand new shelter that was designed in Dallas. It's SPCA of Texas, and I'm showing it to you because I think it's absolutely really beautiful, and they've gotten a lot of attention for the shelter because it's such an attractive shelter. And some people will say, "Well, what about appearances? Does that really matter?" And I would suggest that because it matters so much to the community that you're in; it matters to adopters; it matters to your funders, and so it matters to animals.

Obviously, you get double points if you have a beautiful appearance, and it's also very functional. But it's important not to leave this out, and I can't tell you how many times, doing design concept we look at a design and it looks – it's very functional, seems like it would work, and one of the things we want to say is, "But isn't there something fun about it for the community? Isn't there something that the community can get excited about when they come and look at the shelter?"

I was at a shelter, last week, touring with a group of veterinarians from all over the world. And I heard a little girl leaving the shelter saying to her mother, "Wow, this is just like coming to the zoo." And I thought, "Wow, isn't that just what we want?" We want it to be fun to come to the shelter and we want kids and adults and everybody to think that that's an exciting thing to spend their time doing.

When we think about the housing and the design for the housing, we also really want to think about a plan for how we're going to clean the housing. And that's absolutely essential and one of the things that we often see sort of overlooked in shelter housing. So these are examples of some shelter housing that we, really, have seen work quite well where this – over on the right, you'll see a double-sided housing unit and it's got a little porthole here.

And when you go to clean this cage, you can have the animal one side and clean the other side, and then kind of convince the animal to go to the

other side and then clean there. And that way you don't have to interact with the cat during cleaning, which is the time that we know that we're most likely to spread infectious disease. This is a similar setup in a situation where they didn't have a double-sided cage, but they planned to keep a carrier – and in some cases shelters will do this with a feral cat box.

And I'll show you some pictures of that a little later on – where an animal can be put inside the carrier, and then this is like their own little personal box that they can go inside while you clean either, doing a deep clean or a spot clean. And we'll come back and talk about that. So here's kind of a similar version with the feral cat box, and you can see this kitty's got his Plexiglas front cover on the feral cat box, which allowed them to come in and do some tidying in the cage without him either jumping out or rubbing all over them.

And so, this was part of the plan for cleaning in this cage. There's also, obviously, lots of benefits, that we'll come back and talk about a little bit more, for having those feral cat boxes in there. Spot cleaning, again, is a thing that we really want to plan for, because when we do spot cleaning we create less stress for the animal. The way I think about it, is when I go to a hotel what I really don't want is to have somebody come in and turn all my stuff upside down every day. That's stressful to me.

And I wouldn't mind if somebody just could come in and just clean the bathroom, but not have to change everything else that I set up in the room. So spot cleaning is really key, and I wanted to take a few minutes to talk about it. Because one of the things I realize is that people commonly get kind of confused about, "Well, what do you exactly mean by spot cleaning?" The goal of spot cleaning is to keep the space pleasant for the animal while keeping disruption to a real minimum.

So what we mean with that is we don't want anybody spraying while an animal is in the cage. So, basically, we're spot cleaning, we're leaving the animal in the cage and we're just tidying up the cage. I've seen some shelters who kind of think they're spot cleaning, but what they're doing, still, is pulling everything out of the cage while the cat is in there. And, in some cases, that might be even more stressful than taking the cat out during cleaning.

What we really want to do is the minimum amount that we need to do in order to make the cage presentable if it's in a public area, or in order to make the cage pleasant for the animal if it's in a nonpublic area. Whenever we can, we want to leave the bedding and other items in place, because the animals put their scent on that bedding and then that bedding makes them feel good, rather than having it changed every single day.

The reason that I've got this information about spot cleaning right after the planning for cleaning, is you can imagine if we tried to do spot cleaning for a kitty in this small cage – and probably you remember this guy – you can imagine how almost no matter how hard to tried to do spot cleaning around him, that may end up being stressful for him, especially for a cat who's anxious or nervous in the first place.

And so we really need to think about what we're doing in a small cage when we go to do spot cleaning, and just be very careful that we don't – we're not making the animal feel cornered as we're doing that. And that's especially a place where what you want to do is, really, the minimum amount of disruption that you need to do.

Before we go on to that, I see somebody's got a question asking about how effective disposable gowns would be for cleaning of cages of cats that we know to be sick. And, yes, they're incredibly effective, and the same is true with disposable gloves. And, in fact, one of the things we love to recommend for sick animals is even to buy the kinds of disposable gloves that go up higher on your arms if you're not wearing a gown that covers your arms.

What we like, in some cases, even better than disposable gowns is a cloth gown that can be laundered. And so we've worked with lots of shelters that will have sort of a stack of clean cotton gowns that people put on, and they wear them once and then put them in the dirty bin, and so those get washed and reused. And for shelters who've – I've seen several shelters doing that and are really happy with it.

I wanted to talk about the programmatic effect, because that's something that we really want to think about when we design our houses. We want to think about, "Well, how are we going to clean it?" and then we want to think about, "Well, what else are we going to do with the animals in this housing that would make things better?" And for some of you, especially that 20 percent that wanted the wrecking ball, really think about these programmatic effects.

Because if you can't get a brand new shelter, you can make a lot of things better by introducing programs that allow the animals to get out of the cages or allow people to spend time with the animals in their cages. And I went looking through my photographs and I couldn't find any great photographs of people doing this kind of thing with cats, though I know there are lots out there. And I have these, so I just wanted to show them. And I know these are dogs.

And the other reason I wanted to show these ones of dogs is to say that I think, in general, what I see is shelters more commonly think of these

kinds of training programs for dogs and think of them a little bit less often for cats. And so that's why I wanted to put this in here. And this is from an article that I wrote for *Animal Sheltering* magazine about the Austin Humane Society and a hand-feeding program that they have for the dogs there. It was an unbelievable enrichment opportunity.

I see lots of things posted about reading programs for dogs, and this was an incredible volunteer at the Wisconsin Humane Society reading to one of the dogs in the cages. But I would love to see shelters pursuing more things like this for cats. And so one of the things I wanted to do is show you a video. This is one of my foster cats, and I want to show you – it's a really simple little thing, but he loves to do tricks. And he's really frustrated.

He's a cat who doesn't get along with other cats. He wants to be out and doing more things, and so we need to do things to enrich his time and to keep him occupied. And the more trick-training we do with him, the happier he is. So here he comes. This is my son training him to do circus tricks. And this is the kind of thing – he loves this. And this was, I think, the first day that we did this kind of training with him.

And I only have this here just to show you how even a simple trick like this – I think when you put videos and things like this on the Internet, it can help with their adoptability. But, even more, it helps them find great ways to interact with people, and it's a great sort of programmatic way to try to make up for housing that maybe doesn't give them as much opportunity to make their own choices as what you would like.

So I'm going to move on and talk now about space quantity. That's obviously a really important thing. And I see there's a few questions about it, so I'm hoping that this may answer some of those questions. Again, we go back to the five freedoms and we think about that what we really want is the freedom to express normal behavior and we also want freedom from fear and stress. This is, again, another – I've got all my family photos here for you guys tonight.

This is a picture of my cat, Lutchie, and he's one of the longest cats I've ever seen. And what I'm trying to show with this picture is that if we look at this end and we imagine a box that we were making around Lutchie, and say he was lying across the diagonal of that box – I'm even making you do a little bit of geometry, and Lutchie's the hypotenuse of the triangle here – the measurement that we need to allow him to do what he does almost every day is at least 36 inches.

And so somebody had sent in a question asking about the size of cage that we need for animals. And this is what we do at UC Davis. We spend a lot

of time measuring cats and seeing, "Well, gosh, what do they need to feel really comfortable?" And one of the things we've realized is that, in general, we need at least a 36-inch cage to allow an animal to stretch to their full body length. And this is what cats love to do, so we'd want to allow them to do that.

But what we don't want to do is say, "A cage has to be 36 inches long. Because, instead, what we want to do is we want to use what we call – and I talked about this earlier – an outcomes-based assessment. So if we look at this kitty in this cage, we can see that this cage is too small. And when I show this in conferences, people will immediately say, "Oh, it's too small." And then what I say is, "Well, how can you tell it's too small? What are the outcomes that let you know that it's too small?"

What we can see is that this kitty doesn't have enough room in this cage to stretch to his full body length. He doesn't have enough room to be separated from his food and – have separation between his food and his elimination area. We'll come back to that. He doesn't have enough – and one of the most important things is he doesn't have enough room to really stretch his tail and hold it upright. And what we know is that that's a really important thing for a cat to be able to do.

That's a very, very important positive display, behaviorally. And what he's getting is negative reinforcement for that positive behavioral display. So from an outcome-based assessment, when we're looking at the primary enclosure, primary housing unit for an animal, what we say is that we want them to be able to make normal postural adjustments.

And so this is what you want to look at when you're looking at your housing and you're saying, "Well, is it big enough? Can they do these things? Can they turn freely, stand easily, sit, stretch and extend their limbs, move their head, sit and stand without their ears touching the top of the enclosure, and holding their tail erect – this is all from the AFC Guidelines for standards of care – and can they posture comfortably for eating, drink, urination and defecation. And I think we could probably all agree that he is not able to do that in that cage.

If we take a little kitten – and the reason I wanted to put this picture here is to really talk about so the relative size, right. If we have a very small kitten in a cage that we think of as a smaller cage, the relative size may be okay. We still would like to have things like separation between food and litter, and we'd like to allow this kitten more room to play. But we don't have the same problems where this kitty can't stretch to her full body length or she can't raise her tail.

So some of this has to do with the actual size of each animal. And though cats are, in fact, more of a standard size than dogs, so sort of thinking about what size cage you actually need is a little simpler in cats. We know that, especially for the pediatric injuries, I know cats have fewer space demands. On the other hand, we know that they do really need to be able to live in an enriched environment.

And here's a great example. This is a little kitty who just got her brand new feral cat den, and she spent an hour doing exactly what you're seeing now because it turns out that it was so much fun to pop out of something and feel ferocious than it was to not have something that you could pop out of. And so, even though she wasn't afraid and didn't need a place to hide, having this feral cat den gave her opportunities for enrichment that I think nobody had really thought of before this was placed into her cage.

And the feral cat den was put into her cage as partly a practical matter, but also to allow her to have some elevation, a place to hide, a place to go when the housing unit was cleaned. And this is the same kitty that you saw in that picture earlier with the Plexiglas front. So, again, we can look at the size of this cage, and for this kitty it's allowing her to do a lot of the things that we'd like to see.

So she's able to express her normal and natural behaviors really effectively in this housing unit. But if we triple her size, which she will by the time she's an adult, that's going to change her size relationship to that cage pretty dramatically. And we're much less likely to see those kinds of normal and very important behaviors from an animal who's more cramped in their cages. Again, I'm not going to go into a huge amount of detail on this study because it's something Dr. Hurley covered in the webinar just before.

But it is very important to understand, when we look at all the different co-factors and what matters when we look at housing studies for cats in shelters, what matters most can be narrowed down to just a few things. And so what I'm hoping is that we can get you guy to tell us what matters most to you. But what was found in this study was that greater than 9 square feet of floor space, but sadly not, 6 to 8 compared to less than 6. So if 8 wasn't enough bigger to really make a difference, but greater than 9 square feet was enough to make a difference.

Moving cats as few times as possible, so limited movement within the first seven days of arrival was important, and that, in this study, all the large cages were actually compartmentalized, so providing separation between sleeping, resting and eating and elimination areas. And we'll come back to that in just a sec. But here's our next *[break in audio]*.

Alison Gibson: Now, we got a poll question here, and we encourage you to submit your answers. "Do you feel like your housing units are big enough, way too small, almost big enough, and luxurious?" Some yes, some no, not applicable. And while we're waiting for the answers to come in I – too, we got some great questions from the audience. While you're looking at the –

Dr. Newbury: Yeah, I was just going to pick up a couple of those. So why don't –

Alison Gibson: We encourage you to keep those coming.

Dr. Newbury: So yeah –

Alison Gibson: And also, in case you – I just wanted to mention, in case you, for some reason didn't see your video clip – because some people may have had some problem, we encourage people to refresh their browsers.

Dr. Newbury: Okay, so one of the questions – just before we go on – that I wanted to pick up is, "Is this 3-foot cage enough to house two adult cats that are bonded?" Again, always go back to that outcome-based assessment to see can both animals lay down and stretch their full body length comfortably? Is there enough floor space to do that? Can both animals find and express their needs in a housing unit of that size.

So, obviously an ideal situation – and we'll talk a little bit about group housing – but in an ideal situation what we'd love to see is for two animals to have more space than the amount of space that we would recommend for just one animal. So we always want to use that kind of outcome-based assessment. In the ASC Guidelines, there's some research that we present in that group housing that what's recommended is actually 18-square feet. It's much more square footage per cat when you get into a community setting.

Because it's just like friends just make good neighbors, but we want to allow animals the opportunity to be away from the other animal that they're in the housing unit with, and we want to give them the opportunity to be with the animal who's in the housing unit with them. But you can imagine, even your best friend you might not want to stay in a bathroom with them for two weeks. So it's a sort of a similar question.

So here's your poll answers. Thanks, you guys, for all the responses. Again, not surprisingly, that 40 percent of the respondents, almost 40 percent, feel that their housing units are not big enough, that they feel like they're way too small. I'm really happy that at least almost 20 percent feel like they're almost big enough, and then there's another group that has some that they feel like are big enough and some that aren't.

I really think we've made so much progress in the last few years in terms of understanding cat housing, and I think it's really – it's great, and I want to go back to an earlier slide, actually, and show this to you just to give you a sense – oops; that didn't work, sorry – of how much progress we've made. If you think about the kinds of caging that we often felt was really important compared to now, we – I think, in general, people have a better understanding of what cats need.

And before, I think what was generally thought about – and occasionally, I still end up working with a shelter that's doing a design where this is what's happening. And so people just sort of think of a room and think, "Well, how many cats could we fit in here? Let's go with 2 by 2 cages." And, instead, I think people are being much more thoughtful about it now, in huge part, probably because people are recognizing the correlation with health and housing in cats.

And so it's been really fun, really, kind of over the last ten years, but pretty dramatically in the last five years, to kind of watch shelter housing expanding for cats. So I hope all of you are seeing that as well. So when it comes to space quality, then we need to start thinking about are there other factors. And the biggest one that I think about, I think, is the question of human interaction and how often we see housing units that are designed to actually keep out human interaction and prevent animals from interacting with humans.

And I put this picture in because I think this is kind of a classic. And there was one presentation that I went to once that the ASPCA gave, and one of the questions was, "How many of you ever adopted a cat because you felt like it chose you, so that as you were walking by, it reached its paw out and grabbed you?" And it's remarkable to me how many people sort of have those kinds of stories about that.

And I've noticed, even myself, that when I have access to both kind of the front side of a shelter and the back side of the shelter, that if I want to go through and really look at the cats, I often go to the back side because that's the side where I can interact with the kitties. And so what I guess I really want to say here, as we're talking about it, is I want you – I hope you will come to allow human interaction.

This is – again, these are pictures from Wisconsin Humane Society where, even though they have glass-fronted housing units, they've got all these special little holes where the animals can come and interact with the public, and the cats love it and so do the people. And I can show you – I can tell you, actually, about posters that I've see from all around the world sort of asking people and demanding that people don't touch the cats. And

that's really not what we want. And so what I often say is, "Please, no hermetically sealed cats."

But the difference in this housing unit for having these holes available for this kitty to interact with this person, where if these were all sealed may be the difference between adoption or not and makes this kitty's life so much better. And so what we want you to know is you don't need to fear the adopter. Dr. Hurley talked about this as well, but I wanted to make sure that we included it as part of the housing discussion.

This is actually a little, kind of pilot study that we did where we bought this little piece of diagnostic equipment kind of that you can go through. And this hand belongs to a veterinary student who came to us, clean as she could be, and we had her go through the shelter and do all the annoying things that people hate: sticking her fingers in the cages and scratching kitties' ears and doing all the things she wasn't supposed to do. And then what we did is we measured the amount of organic material on her finger, using this little machine that we got.

And when we measured what was on her hands, it was pretty negligible; it wasn't much there. And then we stopped a random staff worker and we sampled what was on their scrub shirt. And I'm hoping that most of you won't actually be surprised to hear that what was on the staff member's scrub shirt was dramatically higher than what was on our veterinary student, who hadn't been cleaning cages and who hadn't been look at animals who had – who was the equivalent of person who kind of just came from work and was thinking of adopting a cat.

So we really need to think about infectious dose and where fomite transmission really matters and who is really the biggest risk for transmission? And, basically, what we want to do is if we do everything we can to reduce the risk of transmission during cleaning, during feeding, at times when we're doing exams and all of that, that then we can feel more comfortable and allow the adopters to interact with the animals.

And so, I see somebody saying, "Well, how do you stop them from interacting?" And it's all about this Plexiglas front and sealing up the cat so that people won't do that. We really want to encourage people to use hand sanitizers after they've interacted with the animals. We want to make sure that we try to keep sick animals separated from the healthy general population, all of these things that we can do to limit the spread of infectious disease.

I see one person is asking, "What about hand sanitizer between touching different cats?" It's an excellent idea. Somebody else is asking, "Don't we worry about zoonotic disease?" And, yes, we definitely do, but that's one

of the things – that's one of the reasons why we want a really good screening program and a really good monitoring program where we're looking at our animals every day, and we're on top of what's going on with those animals so that we would recognize disease as early as we possibly could. And then those animals – then we can allow it.

When we put those other practices in place, then we can feel more comfortable not fearing the adopters. So I want to move on. I've touched on this a few times now talking about sort of separation between elimination, feeding and resting areas. And I wanted to just show you again, this is a little diagram that we made for the ASC Guidelines, but the study was actually originally done by the Wasson Company.

And what they found is that if cats had a big enough cage that you could have this 2-foot triangulated distance between the resting area, the elimination area and the food area, that cats actually ate better, and this was actually done in a veterinary clinic setting. But it was such exciting information for us to have. I remember the first time I saw this study presented, I was like, "Oh, my gosh. Thank you for doing this because there's so many cats in shelters that have problems with inappetence or other things.

One of the really important things that we've seen that helps us see a correlation with likelihood of coming down with URI, is cat's lose weight when they come into shelters. And so, again, if we can figure out ways and we can design housing units that have not only this 2 foot of distance separation, but that we can actually look at other ways of separating the bedroom and the living room. And so this is currently our favorite way of separation the bedroom and the – sorry, and the bathroom is what I meant.

And this little kitty is really showing off his portal to great effect here. And we have a lot of information on the UC Davis website, which is <http://www.sheltermedicine.com>, about how you can renovate smaller cages into these really beautiful double-sided housing units by using these PVC portals that you can actually make yourself.

And we have a video that's up that we just finished a couple months ago, showing really, really, step by step, how to do it. You can actually see our UC Davis veterinarians cutting those holes in shelter cages, and we joke all the time with our shelter veterinarians, we think it might be one of the most important surgeries we can do, cutting holes in stainless steel cages. Here's an example of what that can look like if you had, say a bank of four cages that you wanted to turn into a bank of two double-sided cages.

And just an example of the way that we kind of try to talk about this, what we love about this is two room-size compartments. So in this case,

especially, that's what we like, that we don't have two tiny little cages that we cut holes on and there's still nowhere for the animal to stretch to their full body length. If that's all you've got, it's still better to give them this double-sided home, because then you can move the litter box out of the left side and put it on the right side, and then at least they have clear enough floor space to stretch out on one side.

Somebody's got a question about multi levels. And, yeah, multi levels are great, but we don't think that probably makes up for the amount of floor space. Because, again, if you go back to my kitty, Lutchie, and think about, "Well, would adding a shelf for him in a 2 by 2-foot cage help?" It probably wouldn't because it still wouldn't give him enough room to stretch out. And so, again, it always goes back, always to that outcomes-based assessment.

Does the shelf actually allow them to do something different and in a better way? Often, those shelves that are built into housing units get in the way, for example, when you want to try to add a feral cat den, or they can get in the way when you're trying to add sort of other enrichment items. They don't always. The other thing that we often don't love about shelves is that they often make very narrow shelves, so that the animals don't actually use them very often unless they're little kittens. They'll go up there, but if you have a bigger adult cat, they'll be less likely to do it.

We also love – in this particular example, we love that there's wheels on this housing bank because it makes it really nice if you want them out either for cleaning or for rearranging in different configurations. Or even there's one shelter that we know of where they took the idea of minimizing cage moves to a really high level. And what they do is they put the cat in the cage and then they move the whole cage when it's time to move that animal.

What I'm going to do is – somebody's got a question about what cages do we recommend, and that's why I would really suggest that you go to that Pinterest site and look. But what I'm going to do is go through a few examples of things that are out there on the market. So this is a Shor-Line cage, and you can see what they've got is down here – sorry, on the left-hand side, this stainless steel double stacker – they've got a compartment on the right that's a two-high compartment.

It's two sections high and that's where you put your litter box. It's got an exit on the lower side and an exit on the upper side. And so it's got a really nice separation between the bathroom and the living room. It's got a shelf so we can get a little bit of elevation in there. It has plenty of room so the animals can stretch to their full body length, and it's on wheels and so it's easy to move around.

What I love even more is when there's a bigger bathroom area, because I see cats, sometimes – in cages where there's this smaller kind of cubby for litter – have some difficulty still with posturing and getting into the litter box. These are really nice cages if what you're trying to do is sort step up but you don't have room for a giant double-sided cage like the big cages that I showed you before.

The Mason Company has these kind of housing units that are made out of a laminate product. What we love about these is the wire fronts rather than the Plexiglas fronts that really seal the cats in there. Even though those Plexiglas fronts often have little, tiny air holes up here and then they have ventilation out the back, we have found that we're not thrilled with the kind of ventilation that the animals get, and then there's that whole idea of really wanting to allow the animal to interact with humans.

Here's another example of a kind of cubbyhole. This is actually a triple-compartment cage where this – the white cage, down here at the bottom where there's a litter box in this bottom compartment, and then a little hidey box up above the litter box, and then you have a nice, wide living-room area. And then there's these other laminate cages in the lower right-hand corner that can be used as double-sided cages, and they come in different sizes.

So these are all things that are available and you can look at the manufacturers and things on our Pinterest site. This is another thing that I've rarely seen put into shelters, but the Mason Company offers these on their website. And it says that they're sort of infinitely customizable. And we do see shelters that are using sort of a dog-run-style housing unit for cats really successfully.

And San Francisco SPCA has many housing units that are kind of stainless steel dog run, a kind of housing for cats. And they're very, very nice to have, this kind of walk-in housing for cats. It makes them nice to clean and really nice for the animals. And for those of you who are asking about vertical space, they've done a really nice job in both of these examples, talking about vertical space.

Housing also affects other space needs, and so when I'm talking about walk-in housing, what's really nice is that if we look at housing like this, where the animal's living in sort of more of a room-like setting, then we don't have as much heed for things like meet and greet rooms or rooms where we can take the animal just for entertainment or for programmatic needs because a lot of those things can be provided for the animal right in their rooms.

This, on the left, is an example that we absolutely love, where a shelter actually built indoor/outdoor housing for their cats. So what you see kind of in the middle of that picture is a little cat door where the cat can go into a really lovely outdoor space on the other side. So the cats can go in and out, and we get all sorts of great advantages for that. We also can see that in rooms like this, it's much easier to allow the animal to have a kind of separation that we want between the litter box and the resting area and where the food is.

And we can really think about how the layout is going to affect the way the animal experiences the space. So one of the things that we've done is to look at – study this a little bit. And the first study that we've done is in dogs so, again, sorry for all you cat people, but I think we can recognize the strength of this study probably applies to cats as well. But what we did is we looked at dogs in double-sided housing units where they had the choice of whether they wanted to eliminate or the same side as their bed and food or on a different side.

And what we can see from this study is that, overwhelmingly, they're choosing the side without their bed and food. And actually we've collected even more data than you can see on this graph now, and the data just becomes even more overwhelmingly that this is what animals do when we allow them to have the choices that they want to have. And so, conversely, again, we need to recognize what kind of stress may be induced if we don't give them that.

I want to talk now about sort of opportunities for visual concealment. We talked about that when I first showed the feral cat den. But it's very important. There is a couple of studies that we looked at to see that hiding was negatively correlated with cortisol concentration, so that we can say that if an animal is given the ability to use its natural coping mechanism, we know that that reduces stress.

The way I think about this all the time is that I'm much more likely to go to a party if I know I can leave when I want to, and I think that that's really important for cats as well. So if we can fit that kind of a hiding box into the housing unit, then we can do things like this where we actually cover a side of the cage to allow them, still, that opportunity for visual concealment. And here's just another kind of couple of examples of sort of alternate options of what you can do.

Here's an example where they've covered a shelf with a towel so the kitties can hide because those are cages where a feral box wouldn't fit or any other good kind of large enough housing box wouldn't fit. Here's an example, again, of just some things that we've cooked up that you can do

for dogs, too, that maybe people haven't thought about, that dogs like to be able to conceal themselves, visually, sometimes too.

And here's, again, just some examples of how great housing boxes can be, both as hiding places, if you're feeling a little nervous, and enrichment areas that provide elevation if you're not feeling nervous. And here's our last poll I think.

Alison Gibson: Yup. We have one last poll. "Do you provide hiding spots for cats? No, sometimes, most of the time, always, not applicable. And go ahead, make your selection, and we'll have the results in a minute. And we want to let you know that all of your responses are anonymous, so go ahead and be as honest as you can. And, also, I want to remind people that we do have the link to the Pinterest site on our widget, our resource widget, so feel free to click on that when you want. Could we have results?"

Dr. Newbury: Great. So thank you, guys, for your answers. And this is so encouraging that at least 30 percent of you have them most of the time; 12 percent always. I hope that we can get the 10 percent of no to figure out a way to try to make it happen. There's so many different ways, even if all you can do is give them a paper bag. I have a little foster kitten, right now, and I think his favorite enrichment item I've given him so far is a paper bag.

So, again, now moving on, I know there was a question earlier about Kuranda beds, and, again, this is a link that you'll find on <http://www.sheltermedicine.com>. We've got really detailed instructions on how you can actually build your own cat bed. You can provide this elevated perch, and what's nice with these is that they're wide enough and provide a nice, soft resting area for cats in shelters. And you see, even here, how they fit into a cage that has a portal cut into it.

So group housing is something that we often get lots of questions about. And, again, we want to go back to kind of an outcomes-based assessment when we think about it. We always want to balance the risk of exposure with the benefits of socialization. And, as I talked about earlier, that goes both ways. We also want to think about as we have more animals in a group, they become more difficult to monitor, and so we really want to be careful as we put more animals into a group. I'm waiting for this video to load.

Alison Gibson: And remind people there won't be any audio on this, so don't try to adjust your dial.

Dr. Newbury: Ah, great. So this is an example, and I think I could have taken this video in many shelters all over the country. But I hope that now that we've been talking about this kind of outcomes-based assessment, that you all will be

able to, in your minds think about, "Well, from an outcomes-based perspective, how can we see that we've overdone it in this housing room, that we have too many cats?" We can see that there's not enough resources.

Not because we can say, "Oh, there's only four bowls and they need more bowls." We can say, "There's not enough feeding resources because we can see the cats are stressed about getting to the food." We can see that there's not enough places for visual concealment because part we can look and see there's hardly any, but we can also just sense the tension in the room and see that there's very few cats that are comfortably resting.

When we think about putting animals into group environments, we need to realize that we create some exposure risk. And when we do that, it's important to recognize that that exposure risk persists. And so I'm going to go through this a little bit quickly, but basically the idea is if we put one animal in a room, the exposure is 1. If we put two animals in a room, the exposure risk is 2. If we add a third, the risk for everybody goes to 3, and when we add a fourth, the exposure risk for everybody goes to 4.

But now, what if animals start getting adopted. There's only two animals in the room now, but the exposure risk is still 4. Now, there's only one animal in the room and the exposure risk is still 4. And if we add another animal, now there's two animals, but both have the exposure risk of 5, and this circular animal, down here in the corner, went from an exposure risk of 1 to 5 in one leap, really, just be entering that room.

If we wanted to, if that animal gets adopted, now we just have one animal, and we have a new animal come into the shelter, really, from an ideal perspective, what we would probably want to do is put those two animals in a room together so that we can get one of the rooms back to zero. When we don't do that, we can build these exposure risks up into the hundreds and the thousands, and that's when we can see real problems with things like FIP start developing.

And so what we love is to have smaller rooms with fewer cats that we call – that you can use flexibly. So you can move animals and periodically get those numbers back down to zero. Another thing to think about in terms of exposure risk, but probably worth the benefit in many cases when animals are going to be staying more long term, is to think about putting an area in the corner of rooms where animals can play and interact with humans and get out of their cages. And that's especially important in settings where cages are small and difficult to use.

Air quality is something that I think is often overlooked, even though ventilation is often considered. If you think about what happens within a

room that's housing cats, where we have dust and hair and dust from the litter, that we can end up with really poor air quality. And this actually was taken – this is a sample of air that I took, using a special machine. And this is the amount of bacteria that grew on the plate.

And so, even though we know that cats tend to not aerosolize their pathogens the way that dogs do, so separate ventilation is not as important for sick cats, ventilation and adequate ventilation, is incredibly important. Fresh air is probably the best kind of ventilation that can be provided, and so this is a little plug for our favorite things, which is this indoor/outdoor housing that I talked about before. We love that.

And then to just really get into thinking about enrichment, I talked just very briefly about enrichment earlier, but I wanted to just kind of throw out all the different ideas for enrichment that there are: windows; bird feeders; playtime; as I said, tricks, training and rewards; walking programs for cats I don't think I've ever seen in a shelter. I'd love to hear about it. Send me a message if you're doing a walking program for cats because it's certainly part of the enrichment program I'm using for one of our foster cats right now.

And I wanted to show you this video. This is actually a foster cat who came to our house. And he had two broken legs; he had a fractured sternum and several other broken bones, and I think he had probably been attacked by a dog. And when we brought him to our house, we put him in the bathroom and he was resting. And he was resting so quietly and I was really happy about it. And my son insisted that we needed to give him something to play with. And I said, "Oh, honey, he doesn't want to play. He's really injured." And he said, "No, I bet he wants to play anyway."

So here's what my son made and here's what the kitty did. And this is how I learned how important enrichment is, even for cats who are healing. And so I just wanted you guys to see this to really stress, even though this guy, all he did was lay around on his back all day long, he still was a kitten and he knew that, and he knew that kittens needed to play. And so, even when it seems like there's no reasonable way that you could provide enrichment, there probably is. And that was the lesson that I learned in this case.

So I guess what I want to leave you with is kind of what can you do now. Now that we've spent all this time talking about housing, what can you do tomorrow? You can, I hope, find some way to provide opportunities for concealment; you can definitely find ways of providing enrichment. And I guess I wanted to leave you with that there, the kitten, just to see how just a little piece of that wrap was enough to keep him happy for several weeks actually.

You can train a dog to keep quiet, and that's really important. It's another one of those things we actually have excellent research to show us that just the sound of dogs barking is enough to make cats feel pretty significantly stressed. You can switch over to spot cleaning so that animals aren't kind of getting pulled out of their cages and stressed by the whole process of cleaning.

And I think that one, for me, really hits home because of how much I travel and how much I hate it when people come in and turn all my stuff upside down. Can improve your efficiency of all your programs and your flow through, and you can drop your length of stay in order to increase space. And we've got some really great case studies of shelters that have done that that are available.

And when you look in the population management and look at ASPCA Pro where we did a whole series of webinars for the ASP Guidelines. And some of those are also available on *Animal Sheltering* magazine, and Elizabeth Berliner actually also did a fantastic presentation on population management for Maddie's Institute that I know is also available to you. And I can't encourage you enough to look at that because, really, good population planning and efficiency is like the pathway. It's like the golden road to better housing.

And if you do all of those things then, make a more long-range plan for the physical housing improvements that you want to make. But there's a lot that you can do, even without the wrecking ball as we talked about. I wanted to thank you all for all of the work you do every day. It's amazing to me how much people in shelters do, saving lives every minute. And it just makes me so happy and proud to thank you for all of that. And I wanted to give a special thanks to the ASPCA for their partnership with UC Davis. That makes my position possible.

Alison Gibson: Well, thank you so much, Dr. –

Dr. Newbury: And thanks to Maddie's Fund.

Alison Gibson: Yeah. Thank you so much, Dr. Newbury. We owe you a lot. And we want to thank all of our audience for your time tonight, and we encourage you to ask some questions because I think we have some time left. I think there's some questions in the In-Box, Sandra, if you want to –

Dr. Newbury: Yeah. So there's a few of these I'd love to get to. There's one question about the website for building your own beds. And that's on <http://www.sheltermedicine.com>; hopefully, that's easy to remember. That's the UC Davis website, and if you just go in the search and put, I

think, "build your own cat bed," it'll actually come up. If you can't find it, let us know. But we'll also get the link and have that posted on Maddie's Institute. Is that true we can do that, Alison?

Alison Gibson: Yes, yes.

Dr. Newbury: Okay. And then, somebody else has a question and I'll push this one up to the slide. It's just asking, "How are paper bags used for concealment." I thought that would be discussed. I'm sorry. Yeah, we just use a standard, just brown bag. And, right now, I have a foster kitten and he's three weeks old. And I gave him kind of a sandwich-size or a takeout-size brown bag, and he is absolutely in love with it. And what's really nice is they can keep those for several days and then you can get rid of them when they're not using them anymore.

I'm hoping that you guys have all had the pleasure of seeing how much cats love paper bags. They can be entertained for quite some time using a paper bag. And what's really nice is that they can fit into lots of different places, so I can't recommend them enough. Okay, I'm going to push another one up. Somebody's asking about spot cleaning. And the question is, "If you're spot cleaning and not removing the cat from their cage, do you really need to use a disinfectant?" And the answer is really, no.

So what we have people do is use a three-bucket system is what we call it. And we have one bucket of clean rags, one bucket of water that has some detergent in it and then one bucket for the dirty rags. And so each time you go to a cage, first you look and you think, "Do I really need to sponge anything out at all or wipe anything out at all? Is the cage, really, pretty clean already?" And if it is, then you don't need to do anything, because the only thing that's in that cat's cage is that cat's germs.

If the cat is sick and sneezing and there's big goobers all over the wall and you need to get those out, or if it was kittens or somebody has diarrhea and you may need to clean the cage, then you need to get a rag and some detergent and kind of spot clean that. But, otherwise, really what we want is minimum disruption. And then when that cat leaves, before a new cat comes in, that's where you go in with your disinfectant and you clean like heck and you get that all out of there.

Somebody's asking a question about newspaper and the potential for that to be a fomite carrier for shelter cats when used as a cage liner. And, again, I'm not totally sure if the question is that there might already be some kind of virus or fomite in the newspaper. I've never sent that to be a problem. But, again, as long as that newspaper just belongs to that animal, and that's their own germs and their own cage, it's perfectly fine for them

to have that. And then when that's removed, you want to take that out with you.

Somebody else is asking, "Wouldn't a fan have the potential to spread disease?" And I think it depends on how and where that's used. It's really, really important to have adequate ventilation. So if in order to have adequate ventilation you need to have a fan, then that's the way to go. And one of the things that is really important to think about is getting fresh air in and this idea of infectious dose. And so say an animal coughs and puts some infectious material into the air, a fan is going to blow that material and dilute it.

It's sort of like when you're washing the dishes, that as you pour more water into a bowl the material that's there is diluted. And the infectious dose becomes so diluted that it's not really a risk. And so, in some ways, yes, it has the potential to do that. But the benefit from having all that better ventilation and having the fresh air coming in and diluting that infectious dose is worth it.

Somebody else is asking a question about indoor/outdoor housing, which is one of my favorite things. They're planning a communal room with outside access. "Would you suggest a small cat door as in your picture, or a glass door that can be left open in decent weather and would allow natural light when closed?" That really depends on your environment. I've been working with some shelters in northern climates that are really very interested – one is a shelter up in Canada – in having indoor-outdoor housing. And for them, it probably makes a lot more sense to have a smaller door because it'll help them keep air conditioning in in the summer and it'll help keep the heat in in the winter. Even though it would still allow the cats to make the choice if they wanted to go out, even if it was cold or hot.

In an area where the weather tends to be more similar, like California, you may – then you may want to have – or a shelter where you're not as air-conditioned or heated, then you may want to have a larger door. You can always have a big window and a small cat door within that big window too. Somebody else is asking about portholes. Now, I've lost that question. Sorry. I'm going to take this last one instead.

Alison Gibson: Yeah, we could –

Dr. Newbury: If a gown –

Alison Gibson: – one more question.

Dr. Newbury:

That's right. I just saw that too. "So if a gown is worn, would it need to be changed after cleaning each kennels?" And I think that really depends on the area where you are and what the risk is. So in an environment where you're really concerned about transmission between each animal, then you might want to change your gown between each animal. In an area where you feel there's a little bit less risk, you may just want to change your gown before you leave particular wards.

So, for example, if you're in the isolation ward and you feel like most of the animals that are in the isolation ward being treated for respiratory disease, for URI, all have basically the same symptoms, then you can wear a gown and leave that gown before you leave that room. On the other hand, if you had say – most of the animals you thought maybe had herpesvirus and one or two had calici or signs of calici, you may want to wear a dedicated gown just for those two animals.

If you were treating cases of panleukopenia, as an example, you really may want to wear a separate gown for treating each animal because you're not – especially when you're not sure of what's going on, always better to err on the side of safety. Thanks for all your great questions. This was really lovely. You had so many questions and so much –

Alison Gibson:

Great information, Dr. Newbury. And I guess we've come to the end of the event for this evening, and we want to thank you so very much, Dr. Newbury, and all of you for your time tonight. And we'd also like to ask you, in the audience, to click on the link to take our survey. And if you don't see it, it may have been blocked up by your pop-up blocker or it could be on a different screen. But that's okay, as we'll be e-mailing you the link. And we'd really appreciate it if you could a few minutes to respond to it.

And, by the way, our next webcast is on canine behavior modification, and that's scheduled for Thursday, December 6th. And that's when Dr. Sheila D'Arpino will be here to present, *Shelter Dog Mod Squad: Identifying and Modifying Canine Behavior Problems in Shelters*, and you're just not going to want to miss that, so watch your In-Box for all the details. We also invite you to visit our website at <http://www.maddiesinstitute.org>. And that's where you can explore all of the learning opportunities we have on offer, including all of our free webcasts, and they're available on demand.

And if you didn't have a chance to check out those resources in the widgets at the bottom of your screen, don't worry. We'll be e-mailing you links to them as well, and we'll be contacting the winners of the *Shelter Inflectional Control Manual*. We'll also share a link to the archived

version of tonight's webcast when that's ready. So thanks again for being here this evening, and we wish you all a very good night.

Alison Gibson: Good night, everyone.

[End of Audio]