ADVISORY COUNCIL ON
RADIATION PROTECTION

CERTIFIED
ORIGINAL

Florida Department of Health
Bureau of Radiation Control

Hampton Inn & Suites

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Tampa, Florida 33607

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Reported by
Rita G. Meyer, RDR, CRR, CRC
Realtime Reporter and Notary Public
State of Florida at Large

ADVISORY COUNCIL MEMBERS PRESENT:

Mark S. Seddon, M.P., DABR, DABMP (Vice-Chairman)
Chantel Corbett, AS, CNMT, RT (N), RSO
Adam Weaver, MS, CHP
Joseph Danek, CHP
Jennifer L. Peterson, M.D.
Kathleen Drotar, Ph.D., M.Ed., RT. (R)(N)(T)
Albert Tineo, MS, CNMT
Nicholas Plaxton, M.D.
Rosevelt Nheik, RRA, RT, (R) (VI) (ARRT), RPA (CBRPA), MRS
Dawn Shepard, NP, Florida Gulf Coast University

FLORIDA DEPARTMENT OF HEALTH STAFF
BUREAU OF RADIATION CONTROL:

Clark Eldredge, Bureau Chief
James Futch, Environmental Administrator
Kevin Kunder, CNMT, RT(N), Environmental Administrator
Lisa Gavathas, Environmental Administrator
Dayle Mooney, MQA Administrator (Appearing remotely)
Evalee Taylor, Programs Operations Administrator (Appearing remotely)
Joshua Carde, IT specialist

GUEST SPEAKER:

Adam Wang, Ph.D. (Appearing remotely)
Stanford University

MEMBERS OF THE PUBLIC:

Sean O. Wilson, MS, DABR, West Physics

AGENDA

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MORNING SESSION

AFTERNOON SESSION

MARK SEDDON: We have the majority of folks here. I think James said there's some people running a little behind because of meeting some traffic.

All right. So we'll go ahead and do our introductions, if that's okay. All right. Start from this side, Joseph?

JOSEPH DANEK: Yes. I'm Joe Danek. I'm a certified health physicist. I'm also considered the expert in environmental matters for the advisory council. I'm retired. I think I know everybody in here from the past meeting, but I worked for Florida Power and Light and NextEra Energy in their nuclear power program for 35 years.

LISA GAVATHAS: I'm Lisa Gavathas. I am the -- it says environmental specialist, but I'm the environmental administrator for the x-ray program for radiation machines in Tallahassee.

KEVIN KUNDER: I'm Kevin Kunder. I'm the -- I also work for Department of Health Radiation Control and I'm the radioactive materials administrator.

CLARK ELDREDGE: Clark Eldredge, Bureau Chief for the Bureau of Radiation Control.

MARK SEDDON: I'm Mark Seddon. I'm the certified medical physicist. I'm representative and

also serving as the Chair for this meeting.

JAMES FUTCH: James Futch with the microphone. To remind everybody, we're actually being recorded right now. We have a guest coming up and Josh is getting ready for him, so we started the recording early. We're not going to do the whole meeting. Just the parts that have the remote participants.

Anyway, James Futch, Bureau of Radiation Control, Technology Standards, CE; other things. This morning, Brenda and Antonya, administrative support for the group.

If anybody wants to be heard on the recording, you're more than welcome to borrow this. I'm turning it off.

KATHLEEN DROTAR: Kathy Drotar. I'm the radiation -- no, I'm not. Am I?

JAMES FUTCH: We'll get to that in just a second.

KATHLEEN DROTAR: So possibly radiation therapy technologist member or member of the public.

ALBERT TINEO: I'm Albert Tineo. I'm from Halifax Health.

ROSEVELT NHEIK: I'm Rosevelt Nheik. I'm the radiologist assistant for Florida. I work at Moffit Cancer Center.

CHANTEL CORBETT: Chantel Corbett. I work for Fusion Physics. Pending nuclear medicine representation on the council.

JENNIFER PETERSON: I'm Jennifer Peterson. I'm a radiation oncologist at Mayo.

DAWN SHEPARD: My name is Dawn Shepard. I'm a member of the public. I'm also a triple boarded nurse practitioner working for Florida Gulf Coast University. Hi, everyone.

MEMBERS: Good morning.

JOSH CARDE: Oh. My name is Joshua Carde. I'm the senior information business tech consultant. That's just a fancy way of saying I'm the IT guy.

MARK SEDDON: The important guy. All right. So do you want to talk about minutes? Make sure everyone has your lunch order placed in and provided to Miss Lisa.

JAMES FUTCH: And Adam said he was not eating with us and Dr. Plaxton said he was, so hopefully he'll be here soon and he can give that to us.

LISA GAVATHAS: Okay. We have a speaker, a guest speaker coming up who's Adam Wang. He's a PhD assistant professor at Stanford University. And he is on the Space X-ray team. Recently, I was contacted by a radiologist from Mayo Clinic

Rochester. I was contacted by a radiologist, Dr. Sheyna Gifford, from Mayo Clinic, and she was asking what the regulatory requirements were for having an x-ray machine in the State of Florida. So I asked, where are you using it? And she said it was going to be on Kennedy Space Center. So I said, okay.

So I passed it over to NASA, one of our ex co-workers, Tristan Timm and he talked to her. We have e-mail chains going back on forth. And she -- and when he asked her, she said, it will be in space. So it was out of their regulatory purview, I guess.

So anyway, I asked -- she did volunteer to speak to us. She did -- she volunteered to speak to our group. And so when she found out the day and time, she wasn't able to make it, but she did get us in touch with Dr. Wang, who volunteered graciously to be here today and so he's going to be on shortly, hopefully. And James and I talked to him briefly and it sounds like a very interesting topic.

JOSEPH DANEK: Is he also from Stanford?

LISA GAVATHAS: He is from Stanford. He's an assistant professor of radiology at Stanford.

JAMES FUTCH: His bio is actually in the

packet.

JOSEPH DANEK: Oh, it is? Okay.

LISA GAVATHAS: I didn't want to say too much because I didn't want to -- I figured that he would probably introduce himself, so --

JOSEPH DANEK: Yeah.

NICHOLAS PLAXTON: Do they need a technologist in space? Advocations?

JAMES FUTCH: Yeah.

KATHLEEN DROTAR: Are you volunteering?

ROSEVELT NHEIK: I'll go.

JAMES FUTCH: It was really interesting. We're looking for it. For the other part of this morning, we're going to have our -- after Dr. Wang goes and Clark and Kevin give their updates, we're going to have the medical quality assurance staff from Tallahassee remote to answer questions. Not a presentation. To answer questions. And it's basically about the licensing, Rad Tech licensing issues that several facilities and schools have had for about -- since June of last year. And I'll summarize the message for you.

We had a problem, it's, it's, it's fixed or it's on its way to being fixed and Kathy may have some questions and maybe Alberto will have

questions. Anybody else who's an employer or whatever you want. That's what they're here for.

Dayle Mooney is my equivalent on the MQA medical quality assurance side. And she and her, her administrative assistant will be on, Evalee Taylor, whose name I didn't put in here.

Let's see. What else was there? Oh, planning for the next meeting, as long as we're killing a little bit of time, the -- sorry. The planning for the next meeting, we're trying to look at October. I'm getting a little ahead of myself. It's the last thing we'll talk about. I wanted to have it in your heads.

We actually have two talks planned for October. One of those is going to be the radiation safety officer, Kurt Geber, from the Kennedy Space Center, on to basically do a talk along the lines of what KSC uses radiation for.

And there's Dr. Wang, so we'll talk about that later.

Hey, Dr. Wang. How are you doing this morning?

DR. ADAM WANG: Hi. Good. Good morning, everyone. Can you hear me?

JAMES FUTCH: You are loud and clear. Can you hear us okay?

DR. ADAM WANG: Yes. That's great.

JAMES FUTCH: Good. We have assembled -- most of the members are here this morning. And we have a couple minutes ahead of time. I don't know if you want to do your own bio intro or if you want us to or whatever to lead off with. Please, go ahead.

DR. ADAM WANG: Sure. Yeah. Well, thanks again for having me.

So I'm over here in California. I'm an assistant professor of radiology where I lead a research group over at Stanford University in California. I've been part of the Space X-ray team for the past few years and I'm happy to share what we've done as a team. So let me go ahead and pull up my slides.

Is that coming through for you?

JAMES FUTCH: It's beautiful.

DR. ADAM WANG: Okay.

JAMES FUTCH: The first thing I want to say is I want permission to take your mission patch and make T-shirts out of it because that's a pretty cool logo.

DR. ADAM WANG: Yeah. Yeah, that's been fun, one fun part of it, so yeah, that's our mission patch.

And so today, I'm going to share about our -- the story behind the world's first medical x-ray in space.

So just to acknowledge the team. So first I'll just say that I'm -- full disclosure here -- I'm an unpaid consultant, which means basically that I volunteer my time for this project because it's a fun project, so I do this outside of my data out here at Stanford.

Our team is comprised of -- well, first off, I'll acknowledge our fearless leader, team leader Sheyna Gifford, who's at the Mayo Clinic. So our team is comprised of aerospace medicine physicians and radiologists. I'm a researcher, myself. And we have a couple of industry participants, so from x-ray and MK imaging.

So our study goal has been to successfully demonstrate a battery-powered digital portable radiography system in the setting of orbital flight. And essentially, that means in space.

So why x-ray? Well, I think this group knows very well the power of x-rays and the utility of x-rays. It is the most commonly performed terrestrial exams here on earth, medical imaging exam. And of course, it has utility in evaluating

dental disease, musculoskeletal system, lungs, medical devices, lines, tubes and it's also been demonstrated in numerous austere environments such as this example here, using actually very similar technology at Everett Space Camp.

What has not been done is testing it in suborbital or orbital flight. At least for space medicine, we believe that this is going to be important for providing quality health care for long-duration missions and permanent habitations. So think about long-duration trips to Mars or habitation on the moon.

So the equipment that was used -- and by the way, feel free to jump in with questions at any time or I'm happy to take questions at the end.

So the equipment that was used, again, working with the vendors here, so on the x-ray generator side, this is a portable system from MinXray. They're a company based out of the Chicago area and the weight is, as you see here, 7.7 kilograms or about 16 pounds, so it's definitely handheld. You can carry it around, battery powered, and it's already been recognized for military use.

You can see its max output here, 90kV, so it's certainly good enough for x-ray imaging, although

lower power than, say, a fixed system.

On the detector side, we're using the KA Imaging panel and this is, again, a wireless battery powered portable detector. Weighs about eight pounds. And it's full size for chest and other imaging.

I'll talk a little bit about the triple, what's unique about this, the triple layer detector with dual-energy capability. We'll talk a little bit more about that. Importantly, both these pieces of equipment are FDA cleared, so they are -- they can be sold and used commercially here in the U.S.

So the state of space medicine, at least three years ago, was that, you know, I pulled this quote that the advancement of human space flight needs medical imaging technology to insure high-level of inflight care. And as of three years ago, only ultrasounds had been used in space flight. So again, our proof of concept work is to demonstrate the feasibility of performing human radiographs first actually in microgravity.

So at the time, our first mission patch was for diagnostic portable x-ray in space. And again, this was a collaboration among radiologists, physicians, scientists and x-ray vendors. So we called

ourselves DUX initially. And this is our x-ray space duck.

Okay. So the first demonstration was actually just in a parabolic flight. So in microgravity, can you take radiographs? And there's -- you know, when you think about it, in microgravity, there's no reason that the equipment wouldn't function. This equipment doesn't fundamentally rely on gravity. But what does become tricky is things like positioning and, you know, any concerns about motion.

So this was the first technical demonstration, and this is actually, so again, our PI, our leader, team lead, Sheyna Gifford, and then Mike Cairnie, who's with MinXray.

So I have this little video. It's also available on YouTube, and it basically shows, you know, what happened and, again, MinXray put this up just to help publicize what they had done at the time and to demonstrate the diagnostic x-ray in a zero gravity environment. So hopefully the video comes across.

(Video Played)

DR. ADAM WANG: So here they are seated. Strapped in on the flight, just to take a couple

test images. The hand radiograph. Their legs are kind of kicking up because they're in the part of the parabola that's zero gravity, and then as they go into the next parabola, you can see they're floating around. They have a little bit of help positioning with a chest x-ray. Mike is tethered, using the foot straps here just to anchor himself and, of course, Sheyna had the assistance of the crew to help obtain the chest x-ray.

They're still floating around. The photographer. Here's another one.

So as you know, the x-ray image, itself, is very fast and, you know, tried to optimize for speed because to minimize motion. Each of these parabolic flights, I think the flight has about 15 parabolas and when you go to the top of it, you have about thirty seconds of weightlessness or microgravity and so they were, again, playing around acquiring different images and just seeing, again, how well things worked and what the images would look like.

So, and in fact, you know, this is the hand x-ray and then for publication, just for fun, we put it next to the Roentgen's famous first x-ray image of his wife's hand.

Okay. So where actually I joined the project

is just to help with the quantitative assessment of image quality. And so I think, as many of you are familiar, what we like to do is acquire phantom or test pattern images. And this was a phantom that was brought on the parabolic flight. Just a standard radiographic test pattern and under different conditions.

So on the ground, before and after the flight, sort of during a lunar one-sixth gravity part of the flight, zero gravity while buckled to the seat and zero gravity while unbuckled. And in the end, by looking at the spatial resolution, the line pair phantom and the contrast to noise ratio, these different targets, we found that the image quality was equivalent to no change to image quality. And similar findings for the -- between having radiologists look at the hand images. When they were blinded, they didn't see a difference.

So that lead to our team publication in Airspace Medicine and Human Performance, just basically talking about the work that was done in parabolic flight. So that was a couple years ago.

And so after this successful demonstration, then we set our aims higher. And specifically, we rebranded to SpaceXray because now we were thinking

about space. And there have been two main aims here. One is just, again, diagnostic adequacy. So to demonstrate that we can produce both quantitatively and qualitatively, diagnostically adequate radiographs during space flight and in that environment. And so now one concern, potential concern is during space flight, you're in a higher radiation environment, just radiation in outer space. So we want to compare radiographs of human subjects and phantoms compared to ground reference on earth.

The other thing that we, we wanted to be a part of the project is to look at bone mineral density quantification and see if we can evaluate a novel method for assessing crew member bone mineral density using these radiographs. And so the reference here on earth is DXA, which is a standard technique and requires a special piece of equipment I think you guys are familiar with, but we wanted to do this off of our radiographs.

So what are some potential hazards or issues? Well, radiation does to the crew is a potential concern. So we're going to make sure that crew members, only the ones who are being imaged are direct in the beam and then to minimize scatter

radiation through distance, if possible. And then to use phantoms when possible for quantitative analysis.

And then potential concern of dose to the craft. It is a relatively small craft. But again, most components are radiation hardened for space, so we weren't too concerned about any radiation from our imaging. And, and certain radio sensitive equipment might be placed out of the path.

And so we did a quick study to see, you know, in terms of radiation, how much radiation the crew would receive. And based on our protocol, we were anticipating a total of maybe 3.8mSv of radiation -- most of it in flight -- up to 2.4mSv, depending on how many images were taken. And a couple of preflight and postflight images as references. And, of course, that's approximately annual background radiation for -- in the U.S.

And what was interesting to me, at least not being airspace medicine, was that the crew limit for astronauts is 600mSv, so much higher than, than the radiation from being part of this study.

So we were fortunate that we were selected to be part of the Fram2 space flight. This is a recent flight that launched out of Cape Canaveral. And

notably, this flight actually is the first human space flight to earth's polar regions. So I, I actually didn't know that. No previous flight had actually gone over the earth's polar regions. So this was the first to do so. And that's why it was actually called Fram2, because the first men at the North Pole in 1911, their ship was the Fram and so, just following that. This crew of four individuals, first to orbit the poles, and named Fram2.

So it was a private human space flight, all civilian crew of four individuals and launched, you know, just over a month ago. End of March. And, you know, again, for us, we were one of 22 experiments that were selected to be part of the mission. It was a pretty short flight. I think four days in total. So they were pretty busy doing different kinds of experiments.

And I bolded this, but key highlights include capturing the first human x-ray in space and a number of other experiments, including growing mushrooms. But also things like glucose monitoring and brain imaging here after landing to see any changes.

So during the lunch, there was a broadcast and we were very thrilled to have been part of the

discussion in terms of T minus 31 minutes and when they were talking about the research projects, they actually showed off some of our equipment here. So this was not, of course, the equipment that actually went up. This was another set because the equipment was already on board T minus 31.

And so, it was very exciting to see actually the next day, the following day, April 1st, this is actually how we learned that it was successful, through a tweet.

So on Twitter, one of the crew members actually had this long post, you know, saying, okay. The ride was simple but small, but the ride to orbit was smoother than I anticipated. And then, you know, the first few hours, I felt a little motion sickness. After some rest, by the second morning, I was refreshed. We had breakfast, took a few x-rays, and then opened the -- they had a big viewing port to look at the South Pole.

And then he posted a few pictures, including this hand x-ray. So it was how we found out, sort of a very casual post, but to us, we were very excited to see that.

And then, just at the, again, a few days later when they splashed down, there was another live feed

and they, during that, they again highlighted this first successful x-ray, again, did the side by side with the -- so first, of course, Roentgen's first x-ray and then the first x-ray from space.

JAMES FUTCH: Dr. Wang, I have to ask so we can document for prosperity. Whose hand is that?

DR. ADAM WANG: Yeah, so I can't say that. It is one of the crew members but, yeah. Yeah. Anyway. But, anyway. So, yeah.

But anyway, if anyone's interested, you can see the, the tweet here. And I did share the slide, so if anyone's interested in, in any of this material, feel free to ask James or myself.

Okay. And then another tweet from one of the other crew members showed off this chest x-ray in space. Now, these were just using their phones to take pictures of the x-rays as they appeared on the laptop.

So the detector is wirelessly connected to a laptop they had on board and that's how they were able to view the images. And so this isn't the image, itself, but just showing what was posted publically. And again, everything I'm sharing today has been shared publically. So this is the first chest x-ray in space.

JAMES FUTCH: Dr. Wang?

DR. ADAM WANG: Yes.

JAMES FUTCH: I just wanted to ask, the artifact, is that a dosimeter on the left lung?

DR. ADAM WANG: Yeah, so they're wearing what's called a BioButton. I actually don't know what it is, but it's a device that they're wearing, so it is part of the, of the image, yeah, quite prominently, but not a dosimeter. Some sort of BioButton. I'm not sure what that device is.

JOSEPH DANEK: Can I ask a question, Dr. Wang?

JAMES FUTCH: Hold on a second.

JOSEPH DANEK: Dr. Wang, what altitude was this orbit at and was it in gravity, not in gravity? I'm assuming it was -- you were being in gravity while doing this, but altitude and gravity effect, if any.

DR. ADAM WANG: Yeah. I forget the -- I mean, they were definitely in orbital flight. Again, going around the poles, North and South Poles. And so this was, you know -- I mean, I couldn't quite hear the question, but this was definitely in the, you know, zero gravity as they were in flight.

JAMES FUTCH: I think the question was the altitude.

DR. ADAM WANG: Oh, altitude.

JAMES FUTCH: ISS -- go ahead.

DR. ADAM WANG: I'd have to check that. I actually don't know the answer to that.

Okay. So there is this video again that was posted on Twitter by one of the crew, just showing them, showing them acquiring the phantom image.

(Video Played)

DR. ADAM WANG: So I don't know if you could see that and hear that clearly, but, basically, this is the phantom that we sent on this mission, so -- whoops. So there's a phantom right here (indicating); a basic radiography phantom. They also put a Garmin smartwatch on the side and so, again, there's four individuals here. So again, one holding the laptop, one who held it and generator, somebody with their phone taking pictures of this so you can see in the video. So presumably, the fourth is actually taking the video.

And, and again, I think they were all very excited to see this. So this was -- so they did the phantoms first before imaging themselves, so just to make sure the equipment was functioning. So you can hear they were excited and, you know, of course, again, we're very excited that everything worked.

MARK SEDDON: Quick question. Is there a

reason why --

DR. ADAM WANG: Yes.

MARK SEDDON: -- they don't fix the tube in the detector since they're in orbit? Is there a reason for keeping it portable?

DR. ADAM WANG: Yeah. I think going forward, that's something that we would probably try to do. We didn't quite know what the cabin environment would be like. I think they did their best to hold things still. But definitely, if possible, you know, to affix to walls or something.

The -- I think in this case, the phantom was affixed to the detector using some velcro or something, but -- and then when they were imaging their hand or chest, just to -- at least for the detector piece to, you know, place your hand against it or hold the detector.

But, yeah. I mean, basically, like, within the environment, to hold everything as still as possible. But, yeah, if maybe in the future, there was an option to just bound or clamp or something, that would probably be preferred.

JAMES FUTCH: Dr. Wang, I have another question.

DR. ADAM WANG: Yes.

JAMES FUTCH: The crew I know was all volunteer. How much training did they have in, in x-ray? I don't suppose any of them happened to be an x-ray tech on the side?

DR. ADAM WANG: Yeah, no. Great question. Yeah, none of them had, as far as I know, prior experience with x-ray imaging. So there was essentially one or two training sessions of an hour or two familiarizing with the equipment and, and a little bit of imaging beforehand. And so, we, you know, part of the challenge was trying to make it as easy to use as possible. Preprogramming different stations for the generator. Having a clear protocol for push this button, do this, do this, click this button on the laptop to, you know, start the acquisition.

So, yeah, that was one thing that we, you know, had to anticipate and sort of, it was part of the test in terms of, like, how easy is it to instruct others to use equipment that they hadn't used before. So, in fact, that's part of the study.

MARK SEDDON: Another question, if that's okay.

DR. ADAM WANG: Yes.

MARK SEDDON: So is this the first medical x-ray or have you guys done -- have they performed

x-rays on materials in space as part of research, like, you know, sub, you know, like cabinet type of set up?

DR. ADAM WANG: Yeah. So we say we're the first medical because I believe it has been done for, again, nonmedical purposes. So I'm not too clear on exactly, you know, how and what so, you know, what equipment and what exactly.

I think certainly radiating and just the effect of space -- of radiation has been done. So -- but actually, I'm not even sure if that would've been an image. So, so, yeah, but we -- it is clear that this is the first medical -- not this particular phantom, but with the hand and other human imaging.

MARK SEDDON: Thank you.

JAMES FUTCH: Doc, I think we have an answer to the question of the altitude thanks to Mr. Kruger.

DR. ADAM WANG: Okay.

JAMES FUTCH: It looks like the orbit was 126 miles at its closest approach and 257 at its farthest approach. So they're orbiting, like, every 93 minutes. And for comparison, the ISS is 250 miles and I think about a 90-minute orbit. So pretty close to ISS.

DR. ADAM WANG: Okay. Okay. So beyond just

the standard radiographs, again, one thing of interest for us is essentially bone loss during flight. And so -- space flight. Because they're in this microgravity environment, they're going to lose -- astronauts, it's known they lose one to one-and-a-half percent bone mass per month in space. And for comparison, elderly individuals lose about that per year. So it's estimated that if you're to do a three-year space flight to Mars, a third of the astronauts would be at risk for osteoporosis.

So the concern is if you land on Mars, which has about .4G gravity, then you might have a hip fracture. And so, you know, there are things you can do to prevent that. You can exercise. So this is actually Suni Williams. And so, exercise on a treadmill. You can put these straps to load your weight-bearing bones and you can take supplements.

What can be done is measuring net calcium loss. Just measuring it through, for example, in the urine, but that doesn't help you localize where it is. So if you're, for example, at risk for hip fracture or other fracture.

And so the, the gold standard here is DXA, which uses dual-energy x-rays, and you can quantitatively measure aerial bone marrow density,

so these are in the hip and lumbar spine. So DXA measurements. And it uses a scanner like this. This is from Hologic. This is actually what we have clinically and this is a phantom, so with some vertebrae in there.

So again, this is done routinely for osteoporosis screening. And, of course, we wouldn't fly dedicated equipment like this, but our hope is that from a dual-energy radiograph, that we can actually capture similar information.

So the KA Imaging panel that we selected was actually -- it's unique because it actually has three detectors sandwiched together all within the same, very compact detector. So again, the whole thing together was a pound and it's still very thin. Just as thin as any other standard detector, because each of these layers is very thin.

But what you can do with these three detector layers is actually get the spectral information from the x-rays, which gives you dual-energy information. And so, what KA actually has, this is actually part of their FDA cleared product, is they can create -- they can combine those three images to create your traditional image, still create your regular x-ray image. But they can use that spectral information

to create a soft tissue image where you use that spectral information to virtually remove the bone, and so you just look at the soft tissue or vice versa and create a bone image where you virtually remove the soft tissue.

Now, what they have here is more qualitative. So, you know, again, you can look at the different tissues, but to get to true quantification is still actually an open question and quite challenging to, to get the accuracy that you would want. So this is something that's ongoing and that we're very interested in. Can it be used for bone density quantification.

So actually with that, I'm just going to wrap up my presentation and just to say that, you know, it's still early days. We, again, just very recently in the past month, successfully demonstrated the use of portable radiography equipment in the orbital flight. There's more to come. We're working on a journal manuscript where we're going to publish the details of the work that was done and then the DXA analysis is actually ongoing.

So, yeah. I'm happy to answer any questions now. And I have my contact information at the

bottom if anyone would like to reach me.

JAMES FUTCH: Dr. Wang, do you know what journal it's going to be in?

DR. ADAM WANG: Um, we don't know yet. There is a journal in, one of the nature journals called Microgravity, so that's what we're targeting.

I have to admit the whole field of aerospace medicine is new to me, so I've learned about that being part of this project. And so, I don't know the different journals that well. But so the first, our parabolic flight went to Aerospace Medicine and Human Performance. But I understand that Nature Microgravity is another journal in this community.

JAMES FUTCH: Do you know, is there any interest, since this was on a Space X flight that was one of the private ones, is there interest from Space X or NASA to use this or help develop this, especially on the NASA side?

DR. ADAM WANG: Yeah. Absolutely. I think NASA is very interested. So, you know, as a team, we've been talking to them. Now that we've demonstrated it, I think we, you know, potentially we could share what we've learned. And again, you know, thinking about longer flights. And so NASA, as far as I know, is quite interested in this work

and would be interested in similar things.

CLARK ELDREDGE: Dr. Wang, is there -- the actual sensor, itself, is there a grid in that or not, do you know?

DR. ADAM WANG: No grid on the -- for the detector, yeah. In fact, we made that choice. Well, so it's not built in, and you know, it would've been an option to include one. But we made the choice not to include one because of just the challenges of, in case there's a cut off of the artifacts associated with that.

CLARK ELDREDGE: Well, when you work on the angle, any angled instance question, you know, study to see what kind of -- any issues with that? You know, what the problem, being off normal?

DR. ADAM WANG: Yeah. Well, so admittedly, we didn't look at it extensively. We sort of made a decision early on we wouldn't go with the grid. I think it is a portable detector and generally, like, portables are, to me at least in my experience, portables are used without grid. You know, certainly if it were fixed in a system, then to improve image quality, a grid would be valuable, but we felt like for the first technical demonstration, that it wasn't critical. Maybe in the future maybe

that's something to improve image quality and actually would help with the dual-energy imaging as well.

The main challenge for the dual energy is just to get, get accurate quantification is scatter. Scatter is one of the main challenges.

CLARK ELDREDGE: And since you were, you were above the Van Allen belts at this point, but did you see any -- were you able to quantify any increase in background noise on the imaging because of the increased elevation?

DR. ADAM WANG: Yeah. So not visibly. Not anything that we could visibly see. But it's interesting. When I look at the phantom images and try to measure the noise level, I do see a slightly increased noise level, like, on the order of ten percent. So that's something I'm going to look a little more closely at and if that does remain the case, I think it's worth including, you know, in our manuscript in terms of a finding potentially due to the background radiation.

LISA GAVATHAS: I have a couple of questions. Did you have to retrofit any of the equipment to be used in space?

DR. ADAM WANG: Great question. So

essentially, no. The equipment was just used off the shelf. As a commercial off-the-shelf equipment. We -- so there's no modifications. We just made sure everything was set up to be used and ready to use.

Again, the equipment is already -- it's quite appropriate for this environment because, you know, again, it's already battery powered and wireless. It's already been recognized. So, yeah. Essentially, just using it off the shelf as is.

LISA GAVATHAS: Okay. And another question. Is there anything that you expect to learn from x-rays in space that could be possibly used on earth?

DR. ADAM WANG: Yeah. Well, I think the, for example, the bone marrow density is actually something that would be very useful here on earth as well. So you know, ironically, we're actually trying it out for -- for not the first time, but early on, still this is one of the earliest trials of this technology. So I'm doing it in space rather than fully having, you know, it's still a work in progress even here on earth. So that's something that I'm quite excited about.

And I think, you know, there are some

differences in physiology in space, so that's something that we'll keep an eye on. And then again, just thinking about how to make the equipment more accessible and easier to use and user friendly. That helps here on earth as well as, you know, maybe gets into the hands of those who aren't trained medical experts, radiographers and such.

LISA GAVATHAS: I do have one more question. Since you were out of our regulatory control, did, did NASA put any stipulations on use on base, or did they have anything to say regulatory wise?

DR. ADAM WANG: Yeah. So maybe just to give a little background. Sheyna had reached out to Lisa about, inquiring about, you know, what is the regulatory framework for us, since the equipment did launch out of Cape Canaveral in Florida. But -- and so, it was determined that at least we're not within state's jurisdiction. And I recall that when we followed up, it wasn't -- it wasn't in -- somehow it wasn't in federal jurisdiction, either.

So in the end, to be honest, I don't know that there was any direct oversight by -- I mean, this is a unique case, but I don't recall that there was direct oversight, either, from the state or federal side.

JAMES FUTCH: Anybody else have any questions?

Well, I, I would like to say thank you very much. We very much enjoyed this. I think the citizens of Florida, especially the folks interested in medical x-rays, will enjoy looking at this and since we were recording it, actually playing it back.

Whatever the next step is for you and the team, you are always welcome. Just let us know. We do this twice a year. In fact, we --

DR. ADAM WANG: Sure. Yeah.

JAMES FUTCH: -- in the fall, I think, I hope to have the radiation safety officer for Kennedy Space Center come give a talk about use of radiation on the facility and what they do. So if you have any questions, just pass them along; we'll ask them for you.

DR. ADAM WANG: Yeah, that sounds great. Yeah. Thank you for the opportunity to share.

JAMES FUTCH: All right. We'll say goodbye and give him a thank you.

(Applause)

KATHLEEN DROTAR: Thank you.

JAMES FUTCH: Take care.

KATHLEEN DROTAR: Quite interesting.

MARK SEDDON: Very interesting.

KATHLEEN DROTAR: You asked my question.

MARK SEDDON: Huh?

KATHLEEN DROTAR: You asked my question. Thank you.

MARK SEDDON: What was that?

KATHLEEN DROTAR: About a flashpoint. The first one you did ask.

MARK SEDDON: About fixing the --

KATHLEEN DROTAR: Yeah.

CLARK ELDREDGE: Yeah, that was one of my --

MARK SEDDON: Yeah, it seems like it should be easier to do that. Maybe they have to package in like a cushioning to launch so it doesn't get damaged.

KATHLEEN DROTAR: I think they would have to recess it.

CHANTEL CORBETT: Wouldn't it limit the amount of angles in an image, though? At that point, the way they were doing it there, you can manipulate the person and the detector.

KATHLEEN DROTAR: You almost have to have a swivel head on there.

MARK SEDDON: Yeah. You can mount it at, like normal.

KATHLEEN DROTAR: Yeah.

CHANTEL CORBETT: There's obviously gravity changes. You can have the person in different angles as well.

MARK SEDDON: Yeah, you can have different --

KATHLEEN DROTAR: I would think.

CLARK ELDREDGE: There's an opportunity for very unique positioning.

ALBERT TINEO: I believe so.

CHANTEL CORBETT: Just being able to stabilize the person.

CLARK ELDREDGE: Yeah, yeah.

MARK SEDDON: I'm curious if they ever had, like, a broken bone in space. I'm not sure if that's ever happened. And, you know, the utility for doing x-rays and how does the healing, they can track healing. That would be something -- I know in zero gravity, the body healing mechanisms change.

CHANTEL CORBETT: I mean, if that person has bone loss. The people got stuck up there recently.

MARK SEDDON: That's true.

CHANTEL CORBETT: That's significant.

JAMES FUTCH: Well, I -- we have some things to move on to. I just wanted to, while we were talking, we had a gentleman come in from outside. I'm not

sure you want to -- I just want to let you know, we're recording everything, if you are okay with it. Are you attending as a member of the public today?

SEAN WILSON: I am, yes.

JAMES FUTCH: Okay. Go ahead.

SEAN WILSON: Sean Wilson. I'm a diagnostic medical physicist and licensed radiation safety officer with the State of Florida. I work with West Physics.

MARK SEDDON: Welcome, Sean.

CLARK ELDREDGE: The folks have joined. Do you want to introduce yourself?

ADAM WEAVER: I came in late today, sorry. Adam Weaver, USF radiation safety officer.

NICHOLAS PLAXTON: Nicholas Plaxton. I'm a nuclear medicine physician at Bay Pines VA.

MARK SEDDON: Right. I think we're off --

CLARK ELDREDGE: One thing. There was one piece of administrative trivia, so to speak, that we have. It wasn't mentioned yet. Because there was an issue with the noticing of this meeting, we did not -- there can be no official motions or votes from the committee.

KATHLEEN DROTAR: Okay.

MARK SEDDON: That's why we didn't approve the

minutes, if you noticed that.

JAMES FUTCH: Well, we brought them if anybody wants to read them.

MARK SEDDON: You can read them, but they're not official minutes. So they're still draft minutes on the website.

JAMES FUTCH: So that's a first, I am happy to say, that I've ever experienced in the 27 years that I've been leading this council. So it's rare. We apologize. Somewhere between the legal folks and the downtown folks, there was some sort of --

ADAM WEAVER: James, do you allow electronic, like, e-mail vote to approve minutes?

JAMES FUTCH: The --

ADAM WEAVER: Or does it have to be in person?

JAMES FUTCH: It has to be in person. The bylaws do not provide for that.

ADAM WEAVER: All right. Just curious.

MARK SEDDON: Are there anymore lunch --

JAMES FUTCH: Oh, yeah. Anymore lunches? Anybody who is going to be eating at the Luna Cafe', fill out your menu. Speak now or forever eat somewhere else.

CLARK ELDREDGE: Okay. I guess we'll move on. Shall we move on to the Bureau update?

MARK SEDDON: Yeah, move on to Bureau updates.

CLARK ELDREDGE: Reporting on the Bureau of Radiation Control.

So, oddly, for once, for about three weeks, in how many years, we were actually almost fully staffed. We're, you know, 96 percent of our folks, you know. The three vacancies were all technical staff in Tallahassee. So one for James, one for Lisa and one for Kevin. And of course, that did, as I said, that only lasted about three weeks before we had other people vacate.

For on the legislative side, we'll talk one and upcoming up in the emerging issues, but another short one, there was House Bills 6011, HB6011, HB6035 and SB340 about international health organization policies. And that bill was to amend Statute 381.00322, which allows government entities and educational institutions to adopt, implement and enforce international health organizations policies and guidelines or requires for them to -- they can only do that if it's authorized under state law, rule or executive order.

The bill would've eliminated those options so that no state agency or educational institution would've been able to adopt or implement any sort of

international health organization guidelines or policies.

JAMES FUTCH: That was me, sorry.

CLARK ELDREDGE: Which runs into the issue, of course, that, you know, ICRP, is that an international health organization? And radiation protection and medical delivery, we certainly use dose coefficients and other standards from ICRP and so that was part of our analysis that we submitted up about the fact that what would that have done to health care delivery and things like that from the university, the state college medical facilities; things like that. Because they wouldn't have been able to use certain things like that if this bill went through.

Again, there's no definition about what an international health organization was, but we know there are plenty out there that could've impacted all sorts of health care services and things like that.

CHANTEL CORBETT: So that would have impacted what's already in place, not just going forward?

CLARK ELDREDGE: Yes, it would have eliminated any --

ADAM WEAVER: Current.

CLARK ELDREDGE: So, you know. What we would've had to do if we had to go recreate all of ICRP research in Florida to be able to readopt it.

CHANTEL CORBETT: It would be a while.

CLARK ELDREDGE: Yeah.

ADAM WEAVER: That would be quite an undertaking, yes.

CLARK ELDREDGE: Now, while they were all filed, heard, initial ratings, referred to committees, none of them were heard in committees, so they didn't go very far.

KATHLEEN DROTAR: Good.

CLARK ELDREDGE: For our environmental group out of Orlando, something impacting them is Crystal River Power Plant's decommissioning has reached the point the environmental sampling will be significantly reduced, which is a source of funding for our field folks. It's going, dropping 90 percent or so because, you know, all the fuel's now on site; dry cast. You know, most of the waste has been carted off or other waste has been carted off for deposit. In fact, I think we got, what was the billing? A hundred something thousand in one quarter for low-level waste inspections done basically by 1 FTE. So we have a state law where we

go out and inspect all shipments and review and make sure they're packed properly for low-grade shipments. So that was quite a quarter for that, for the folks going and doing that.

ADAM WEAVER: That's a lot of shipments.

CLARK ELDREDGE: Mm-hmm. What else? So that's basically the crux of what I had for the Bureau update.

MARK SEDDON: All right. Thank you, Clark. Do we want to have Kevin give his part, or do you want to start with the in between folks. James?

JAMES FUTCH: Let's ask them. Evalee, I see you're on. Is Dayle also on yet?

EVALEE TAYLOR: Good morning. I'm not sure. Let me doublecheck and make sure.

JAMES FUTCH: That's okay if she's not. We're early for her to start, so we're going to go ahead and go on with the next regular business while we wait. Okay?

EVALEE TAYLOR: Okay, perfect.

JAMES FUTCH: All right.

MARK SEDDON: All right. So we'll jump over to Kevin to give the materials update.

KEVIN KUNDER: So radioactive materials, Charles Hamilton's vacant position since last June

he left and went over to the x-ray program. I finally got a candidate selected. He'll start May 23rd. He's a recent graduate of FSU's Master's program in nuclear physics.

We also recently started a second contract position, so those who have RAM licenses will see the name Julia McRoberts on some of then. She used to work in Oklahoma as a fully certified licensed evaluator. She's also helped out in Mississippi's program, helped out in South Carolina's program and she's going to be working 20 hours until, 20 hours a week until the beginning of July and she'll go to 40 hours a week. So she's, she's really helping us get caught back up.

Rule making, still in progress. Previously mentioned, Department of Health Office of General Counsel's Office returned the entire rules package that we had together since 2019 and requested us to rework it and send it back in individual parts to them. So parts one and two have been sent to legal and we're working on part six now. So no estimates on when that's expected to --

CLARK ELDREDGE: We did get the notice for the part one. It's actually been noticed in --

KEVIN KUNDER: Okay.

CLARK ELDREDGE: That was yesterday. It's been published in the administrative weekly.

KEVIN KUNDER: That's good. Baby steps. Statistics, last month we had 1507 specific licenses; 222 general licenses. That's a total of 1729. We continue to average about 200 licensing actions a month and close to 80 RAM inspections a month that we process due to compliance and violations letters out to the licensees.

General, or GL, general license invoices were mailed out May 1 and they're due back on or before July 1st. Also, Section 17.20 Florida Statutes requires each agency to assign delinquent accounts to a contracted debt collection agency within 120 days after the dates the accounts are due, so for the fiscal year ending June 30th, we've already sent over 31,000 in delinquent accounts to Transworld. That's just for the materials program, to Transworld Systems, Inc. collection agency for which they've recovered almost half, just over 15,000. So we've still got about 16,000 currently outstanding for just this year.

Four medical events since the last meeting. The first was a Y-90 ThereSphere administration. In June of last year, interventional and MAA mapping

was completed. Entire liver was found to be needing treatment. In July, the right hepatic artery was injected without issue. The patient came back in September and had the left hepatic artery injected. Post-treatment imaging showed uptake in the antrum of the stomach, which was later estimated at 75 percent of the dose or 97Gy to that part of the stomach.

The following day the patient was treated for radiation toxicity to the stomach and stayed in the hospital for about three weeks. Patient returned ten days later and subsequently received a partial distal gastrectomy. Findings were the authorized user's failure to visualize the right gastric artery on the pre-infusion angiogram.

Additionally, the site is using recommendations from an international multidisciplinary working group that, that recommended for this particular patient, which was a multifocal bilobar hepatocellular carcinoma without macro-vascular invasion to inject the MAA in the lobe of the higher tumor burden only. So the MAA was only injected in one side.

Other contributing factors are the patient had prior surgeries, including small bowel carcinoid

treatment at another facility with small bowel, liver and omental mass resections. Because of these surgeries in the liver and abdomen, along with some unusual anatomy, it made mapping more challenging.

And finally, the tip of the catheter was pulled back about five to ten millimeters on the Y-90 versus the mapping.

The second and third medical events were the same day same facility. HDR for prostate cancer. A week prior, both patients had their first of two fractions completed. The site used, used to use two different length catheters, 240 millimeter and 290 millimeter. However, discontinued the 240. On this particular day, the last day of the, of the treatment, the second of the two fractions, when the treating AMP entered the lengths into the treatment plan system, he entered them as 1240 millimeters, which is the one millimeter transfer tube plus the 240 millimeter catheter length and they were using the 290.

This happened with both patients that day. The full dose was delivered 50 millimeters short into the perineum. Both patients had to be brought back the following week to re-administer the second fraction.

The fourth medical event was the use of an expired Cardiogen generator for about 22 days. The site is on a four-week generator swap. The nuclear medicine tech removed the old generator from the delivery system and placed it back in the storage room in an open box. He opened the new box and took out the paperwork and there's still a certain number of the facilities that don't have the saline bag bar code reader that can actually read the bar code on the generator. So they took out the documents and typed in all the information into the delivery system, which basically resets it to think it's a new generator in there.

He went back in the room, saw two open boxes, grabbed the old one, reinstalled the old one. There was an error about a failure to reach the appropriate activity. He called another nuclear medicine tech over that was a little more familiar with it to help troubleshoot. The first thing she asked him was, are you sure you inserted the new generator? He said, of course I did. There's a new generator in there. She looked and found he forgot to unclamp the tubing from the saline bag. It was unclamped, reset and tried again. This time there was no error.

She doublechecked the outgoing box and found it had higher activity than she expected. And she just assumed the time that he had the meter set to different, different range. So she thought that was a mistake and didn't say anything.

Since the site had a newer PET CT scan, the images looked fine and it wasn't until the 22nd day after expiration that the system error-ed that the patient's two doses were greater than 20 percent less than what was programmed in there to infuse.

Rule making. Those in the medical, especially nuclear medicine, know there's been NRC rule making on reporting extravasations for medical events. A couple years ago, there was a group that had put forth a bill to Congress that wanted clarification on directing, basically, the NRC providers to report extravasations during PET and SPECT scans as mistakes. So it has reemerged again for this year, 2025.

The NRC has already begun to revise language in its regulations regarding reporting diagnostic nuclear medicine extravasations, which have been exempt since 1980, yet the Commission decided not to include the 0.5Sv tissue dose threshold in ongoing considerations. So we'll see where that goes.

Nothing's happened yet since it was put forth April 1st or April 2nd.

Final note. I just wanted to bring here, we're seeing more of this. Dose splitting. We've had a few incidents, investigations recently that found doses used were being split between two patients as well as several other concerns, technologists calling in asking if splitting doses is okay. The answer can be yes or no depending on three things.

One, if the facility has an ISO Class 5 Primary Engineering Controls within a Segregated Rate of Pharmaceutical Preparation area.

Two, they have submitted procedures for multi-dose vial use including following the USP General Chapter 825 Radiopharmaceuticals.

And the third is if their radio pharmacy contract allows it.

So just note that receiving a unit dose preparation and splitting into two separate doses may only be performed in the ISO Class 5 Primary Engineering Control. That's part of the Pharmacopeia USP Chapter 825 that came out in, I forget, it was the last couple years. I think it was December of 2020 is when it came out. So that's what's required.

And that's all I got. Any questions?

MARK SEDDON: I think we're good then. Right? All right. Thank you, Kevin.

JAMES FUTCH: Thank you, Kevin. Sorry, Evalee, I didn't realize you couldn't probably hear much at all without the microphone. Can you hear us okay now?

DAYLE MOONEY: We can, and actually, we could, we could hear that presentation very well. Thank you.

JAMES FUTCH: Oh, really? Great. Somebody must have had a mic on somewhere over there. So let me, with the Chair's permission, move on to the next one.

MARK SEDDON: Yes, we can move on to the next one.

JAMES FUTCH: So we have two guests with us from Tallahassee, I'm assuming, it looks like. We have Dayle Mooney, who's the executive director of the Board of Chiro and several other board offices, including radiologic technologist licensure and also EMTs and paramedics.

And with her is her programs operations administrator, Miss Evalee Taylor, who is part of a new role inside the board office that Dayle, I'm

sure, will tell us about, which will have her playing a much greater role for the radiologic technologists.

And we have here in the room with us the normal amount of Council folks. Hopefully you can see some of them. We have two microphones, so if folks want to ask questions, we'll be sharing those with -- so that they can hear us better. And I'll turn it over to you, Dayle, and take it away.

DAYLE MOONEY: Thank you so much. First of all, I'd just like to say thank very much for including us in the meeting today. I know this has been something that we have tried to coordinate and based off of scheduling conflicts at past meetings, it hasn't necessarily been successful, so I'm really glad that we're able to join you all today.

As James said, my name is Dayle Mooney. I'm the executive director for a multi-profession board office that includes chiropractic physicians, optometrists, nursing home administrators, clinical laboratory personnel, medical physicists, EMTs, paramedics and last, but certainly not least, radiation technology.

We have done some pretty extensive reorganization within our office over the past six

months or so in order to meet what we think is an increasing need or dedicated staff that specializes in radiation technology applications. We're happy to say that we accomplished that by moving some of our most senior processors into those roles. These are individuals that already had experience working radiation technology but had other duties that were assigned and we reassigned those duties away so that they were able to solely focus on that.

We also moved the program under the direction of the program operations administrator, which is now a role that's filled by Miss Taylor and -- so that we could have a higher level of management overseeing the implementation of radiation technology and making sure that we are really staying current and coordinating really well with our policy office.

So we think that we're already going to be seeing some improvements in our processes. As I'm sure that you guys are all aware, that licensure processes is ever involving. There are changes to that based off of laws that may or may not impact. There's also improvements based off of feedback that we're getting from applicants and I know that it might have felt a little stale in the past that we

have -- that your concerns hadn't necessarily fallen into action and we think -- well, we hope that you're gonna see a lot more of that in the very near future and have some things that we've already done in order to answer those needs.

I'm gonna let Evalee do a lot of the next presentation. She has really kind of jumped in with both feet and gotten very connected with this program in the short amount of time that she's been there. I'm really proud of the work that she's already managed to accomplish and some of the things that were really getting off the ground. And I think that she, and hopefully James will agree, that we're integrating nicely together and starting to create a good line of communication so that we can really get things moving forward.

So with that, I'm going to turn it to Evalee, and then we can take questions at any point, so if you guys want to jump in and ask us questions, then we can do that. Evalee's got some data for you, as well as some feedback on what kind of our perspective is from the certification office on kind of the state of affairs at present.

EVALEE TAYLOR: Thank you so much for the opportunity to be a part of this meeting. As Dayle

said, I have prepared some data. James and I and Giovanna and Kelly, we meet most Wednesdays and we discuss some of the data that you guys may be interested in hearing. And then also, James made a suggestion to kind of give you guys an idea of the nuts and bolts of applying for an application -- you know, applying for certification and the process and how that works. So my thought on that was to kind of get an example of the life of an application, so I will start with the data first.

And currently, we have a total of 594 open, valid applications. Meaning applications are only valid for six months, so these are all applications that have been submitted since November 1st. So I'm giving, like, a two-week movement there, flexibility. But a total of 594 open applications.

And then some of our current, like right now we have -- our total number of clear, active license are 30,623. And as you guys are aware, renewals have been based on birthdates, so we are in constant renewal of all 30,000 of these licenses. And then some of our data is based on fiscal year 24-25 and I split it up into some of the quarters, especially quarter three which, of course, we've just finished out two months ago, just to kind of give the most

updated information.

And to start with, for fiscal year 24-25, for the first quarter, we had a total of 707 applications. For the second quarter, a total of 548; and then for the third quarter, the most recent quarter, 863. For a three-quarter total of 2,118 incoming applications.

JAMES FUTCH: Evalee, can I interrupt you just a second? We've got the court reporter in the room. She's trying to follow along.

Rita, what were you --

THE COURT REPORTER: Have her sit closer to the mic.

EVELYN: I can also send you, James, I can send this to you, so that way if she wanted to have the most accurate version of the numbers I'm saying, I can do that if that's clearer.

JAMES FUTCH: Okay. Are you able to share from where you're at or is that too hard?

THE COURT REPORTER: Or have her sit closer to the mic. She's kind of muffled.

JAMES FUTCH: Yeah, there's a little bit of a tinny -- maybe if you sit a little closer to the laptop if you're working off the laptop. And also, Rita, I've got recording this whole thing.

EVALEE TAYLOR: Sorry. Here we go. I do have -- so this is the data that I'm going over. And then for quarter three, there -- a lot of this will look like foreign language, but the numbers are really the most important. And for the average day to issue a license from the application date. So this doesn't necessarily mean how long it took us to process a document. This is from the day that they apply to the day that we issue the license. The average day is 41.13 days.

For the average to process an initial application, meaning the application is submitted and a processor from the office reviews the application and all the supporting documents for the first time, the average is 11 days. And there have been a total of 897 from, the original 897 from January 1st through March 31st.

DAYLE MOONEY: Evalee?

EVALEE TAYLOR: Yes.

DAYLE MOONEY: Can I just -- I want to clarify one thing on the M1 data, the 41 days. So -- and I think it's important to notate here, our calculations are based off of the first time an application is submitted into our system to the date that it is ultimately approved, inclusive of all

applications in this timeframe. This data also includes things like when an applicant submits an application but does not pay. And so then they might come back in a week later and pay for that. So their first -- if that application, if that ultimately is approved, then it is included in our calculations here. So 41.13 is an average, but there are a lot of outliers within that that's gonna bring us down to that 41.

Our performance goal is, you know, we try and keep that under 49 days, but that's for all professions. I think that Evalee and I would like to see that number a little lower than, than the 41.1. And I will say that it is trending down. And when we get together next, we'll have some trend data for you, but we've done a lot of data cleanup lately and did not feel confident in previous data to give you an accurate trend, so we'll, we'll get that ready for you for the next time.

But I wanted to just clarify. These numbers are good numbers for us, but they can also be misleading. It is definitely not typical for it to take up to 41 days for your -- for an applicant that applies online, pays and has a complete application.

EVALEE TAYLOR: Right. So the other dates that

are all the 11 and the 2.54 and the two dates, those are ones complete or ones -- so a lot of times that 41.13 is just that it stays efficient. We didn't have -- it wasn't a complete application. So, so that total, that average is different than the three averages underneath them. The three averages underneath those are based on our processing rate, not just how long it takes an applicant to get their application file complete.

So the 2.54 days and the two business days, that's how long that the average, during the third quarter, that it took our processors to approve or deny applications once complete. So I think that this data can show that while sometimes it can take a while for an application to be complete and approved, it's not necessarily on the processor side of it, because our data shows that we're, we're processing in less than three days and approving in less than three days once complete.

JAMES FUTCH: So Evalee, just to make sure I understand because I'm getting some questions from the room around me. The quarter three is basically January 1 through the end of March. That's what we're talking about?

EVALEE TAYLOR: Yes. Yes.

JAMES FUTCH: Okay. And these are just the applications that will be considered to be not expired by statute. So basically, the ones that we've received, looks like, since November 1st, 2024.

EVALEE TAYLOR: Yes.

JAMES FUTCH: Okay.

EVALEE TAYLOR: The total apps that are open currently. I used that as the date, even though that first --

JAMES FUTCH: Right.

EVALEE TAYLOR: -- twelve days of November, if they submitted it then, would be considered expired at this point. I wanted to give some freedom, some flexibility there because sometimes, there will be a few outliers that may not be completely expired. You know, maybe they submitted their document three days before their application expired and we just haven't had a chance to process it yet. So I included a few extras --

JAMES FUTCH: Sure.

EVALEE TAYLOR: -- based on that.

JAMES FUTCH: And to that --

EVALEE TAYLOR: It's pretty close.

JAMES FUTCH: -- to that I wanted to add that,

you know, when folks reach the end of that time period, we don't just like, you know, toss them out. In fact, Giovanna's been going through the, the minutia of the folks at the far end of this just to make very, very, very sure that every single person, you know, didn't submit something some place that got stuck in a, you know, an e-mail box before she, before she turns it back over to, to Dayle's group to say, yes, I think these are truly ones that, that don't meet the statute requirement.

EVALEE TAYLOR: Right. She's definitely been -- that was one of the assignments that she and I discussed and decided that would be really helpful just in case there were any that, like you said, that had submitted the document but it somehow got missed or for whatever reason, just to make sure that before their application is expired in the system, that it is truly expired.

And so, that being said, I will give you guys just a little bit of an overview of the life of an application. And part of that is what happens if an application does expire before it's able to be complete.

So when an application is submitted, if the applicant submits the applicant online, then -- and

pays and submits all their supporting documentation and has already passed the exam, we are able to approve the certification, approve the application on first initial review. That is much easier, much more timely and much more efficient on the processor side of it.

But then, of course, that's not always feasible. Sometimes people submit an application and like we were talking about it expires, then they have to send in a paper application because the system will not allow them to apply online twice.

So when an application is submitted through the mail with a payment, it goes to a separate department -- the finance department -- and they do what they do with the check and then they forward the actual application over to a contracted partner that we have.

They input the application; they make sure that it shows up in our imaging system and then it's routed back to our office and the payment is attached. So paper applications may get through at least three locations before we're even able to process them and then at that point, they show up on the same report as the online applications and our processors are able to go in and do that -- conduct

that initial review and send the initial deficiency letter with anything that may still be needed. And then at that point, the applicant is able to -- or an approval letter, if everything is there. Those are the best.

But if a deficiency letter is sent, then the applicant has the opportunity, up to six months, to submit all of the deficient documents, whether that be their Social Security number, their driver's license, passing exam scores; verification of their other state license.

You know, the deficiencies vary, but they have six months to submit that documentation. And then there are multiple ways to submit that. Documents can be uploaded to the online system. Documents can be e-mailed. We have a fax number. We also receive paper mail these days, still very little for Rad Techs, but we do. And then the processors gather all of their documents and add it to the file and conduct a second or third or fourth review of the file until it is complete.

And every -- when we review a file, a new document is sent, an updated deficiency letter to let the applicant knowing anything that's still outstanding and the process continues until either

we get all the documents and we're able to approve the application, or like I said before, or it expires.

And there are all kind of varying things or delays that could come up during the process. And one of the things that we talked about was kind of going over the top deficiencies.

So probably the biggest deficiency that we see is an applicant that has not applied the correct way. Meaning they chose a different pathway or a different method of qualifying than what they necessarily need to. A lot of times, applicants will apply for an exam when they already have their exam scheduled. So really, they probably should apply by endorsement or even wait until they've passed the exam and then apply by endorsement.

We also have applicants that do not receive their education in the United States and then they apply for endorsement when they should have applied for exam. So we see a lot of that.

Choosing the correct modifier, the correct pathway, the correct type of license, even, honestly. Apply for GR when they meant DXMO or vice versa. We see a lot of that deficiency. And unfortunately, getting the corrected application

back from the applicant can also turn into an additional delay, because a lot of times, the paper application will confuse applicants and they still won't necessarily submit the information that we need. So even though they've submitted the corrected application, we still have to send another deficiency letter to let them know that the way they submitted it is unacceptable or it still needs a update.

KATHLEEN DROTAR: Evalee, this is Kathy Drotar.

EVALEE TAYLOR: Yes.

KATHLEEN DROTAR: Hi. And that, I know, is a big concern because a lot of times, a new graduate, the question asks have you, have you had previous, or have you had a certification. And in truth, they haven't had one until now. And I think that, you know, a couple of the questions, the way they're worded, I think adds to that confusion. So just, you know -- and I understand why it happens. And, you know, they're graduates. We've tried our best to advise them on how to say, yes, you are ARRT. But I think they, you know, they get away from us and lose that perspective.

EVALEE TAYLOR: Oh, absolutely. We're currently working on updating so the questions --

whenever we first get in an application, there are questions that are called suitability questions. And it's -- the purpose is to kind of field the, you know, ask questions to make sure that the applicant knows exactly that they're applying for the right pathway to the right method of qualification.

The current question or questions that are available that are asked aren't the most efficient and I don't think that they pull the red flags or the yellow flags that they maybe should, so we are working on updating those. We have some of them drafted, but we really want to make sure that we don't add extra steps to an application that aren't necessary, but also that we catch all of the things that can cause delay and that we've worded it in such a way that it will be easily understandable and clear, because I'm one of those people also, when I go to read something, if it doesn't make sense to me, I'm probably going to pick the wrong one, too, honestly, just because I will read too into something and not quite get it as clear.

So we want to make sure and have -- I'm real big about trying to use the rule, the Florida Administrative Code and keep that same language, but make it clear. So that that way, we're asking

exactly what we need to ask. But also at the same time, that the person were asking understands and is able to give an accurate answer.

KATHLEEN DROTAR: Thank you. If you need --

EVALEE TAYLOR: The ultimate goal --

KATHLEEN DROTAR: If you need a base to test it, let me know.

JAMES FUTCH: Kathy is offering all of Keiser's schools, I think, to be the testers.

DAYLE MOONEY: We worked -- when we developed these suitability questions, we worked very closely with James' team. We can certainly, you know, feel them out. And these are -- the suitability questions are preliminary questions. They're like, are you ready to apply? They don't prevent you from applying and they're not actually application questions.

The questions that are on the actual application are questions that are based off of the application that's incorporated into the rule by reference and have force of law. So making those changes is a little bit more laborious of a process, so we feel like we can either get there quicker by adding some helpful hints inside the actual application or asking the front-end questions of, is

this the right pathway and if you answer -- they're yes and no questions. And if you answer yes, then no problem. If you answer no, it will say, you may want to back up and apply this way. You may want to back up and do this. Or if you're not prepared to give us this information, if we say, are you prepared to give us a copy of your current ARRT certification? Yes, great. No, please be aware that failure to be able to provide this information could result in licensure delay. Just so that applicants have that awareness that this is a required element and if they don't do this correctly, then it could be, you know, it could cause some issues for them.

So we think we're gonna fine tune those. Those are fully within our control. They don't have force of law because they don't actually stop someone from moving forward with an application, but it's a -- we find with other professions, that it's a good way of reducing frequent deficiency items.

JAMES FUTCH: I wanted to -- I don't want to interrupt you, Evalee, if you had more that you were going to go forward with. I wanted to back up and give a little bit of a 30,000 foot overview.

The profession became -- we started, entered

into this relationship with MQA in 2005. That's when the initial set of online applications was put together and as Dayle very rightly said, the paper application, which was the thing that's incorporated in the rule, is what we have to mimic online as best as possible.

In past experience with changing rules, as this committee knows, just changing one or two simple aspects of CE took, I think, two-and-a-half years to get through a rule change, so there is much room for improvement.

I know MQA is moving to a new system at some point. I'll give you a basic example of some of the ways things are implemented in the application. If you want to apply to become a general radiographer, the first question that is asked of you is, do you want to apply to become a general radiographer? However, if you want to become, let's say, a mammography tech, the system is set up first ask you, do you want to become a mammographer? You say yes or no. If you say no, then it asks you if you want to become a nuclear medicine technologist. And you say no, and so forth and so forth in a very linear fashion until you get to what we think is the smallest number of professionals who could probably

want to apply for the thing that's seven layers deep.

If it were possible back in 2005 to do it differently, they would have. Going forward, we're hopeful there will be latitude that will allow, for example, perhaps a screen where you check box, hey, which one of these things do you want to apply for, something like that.

We got to the place that we're at right now, though, because basically, there was a shortage of some staff -- very important, very highly skilled staff left in the middle of last year and that caused a workload issue that Dayle's group started to respond to. And given the way things worked and the time it took, there was extra work to go around, so processing -- some of my staff were data processed to help out. A whole bunch of EMT paramedic staff learned how to process because they're, what is it, twice as big as us or three times as many licensed professionals.

So all of that hit around June, July of last year. And at one point in time, I know Kelly and Giovanna, I think, I forget how many they were doing in a week, but a lot of people, and all of us became acutely aware what the processors had probably known

for a long time, that there's room for improvement.

One of the things from my perspective is to -- and by the way, for Kathy's assistance as the President of Florida Society of Rad Techs, we have an upcoming Teams meeting with Dayle and her staff and all of the program directors that Kathy can wrangle.

KATHLEEN DROTAR: In the State of Florida.

JAMES FUTCH: In the State of Florida. Not national. Just in the State of Florida. Seventy some odd possibilities. To do a meeting like this, and talk directly from the folks who are giving us the applicants, to the folks who are processing, to help figure out some more of optimization of the pathways and how best to do it.

My personal feeling is perhaps shared by some of the others. Is if you apply, what happens if you apply by exam is, 99 times out of a hundred, you're going to go -- people want to become licensed by the national registry, ARRT or NMTCB. They apply for perhaps both. They're going to get set up by ARRT, so that literally on the day after their graduation, they've already got probably their exam scheduled. And they're going to know the pass or fail unofficially as soon as they get finished at that

testing center on that very day. And they become official three days later and get their license electronically, typically within a week online.

The application by exam, I think is mostly used because people think, oh, I'm going to get a temporary so I can go to work on the first day of my graduation. And that's an archaic holdover from years gone by from when tests were only available twice a year, paper and pencil, so you had a temporary to cover you for the six months it took you to get to the next exam.

That's not typically what happens. What does happen is they get licensed by ARRT and in the process, when they are sent by us, let's say we actually got them through the process. It was one of Evalee's completely -- everything was there, there was no delay, no deficiency letters had to be sent and we managed to get them processed and we sent them to ARRT on the same day or maybe a day after.

When ARRT gets that application from them, they will only let them take that test, that ARRT exam which they're administering for us as the state candidate, they will only let the applicant take it from one or two organizations. They will not let

them take it and have it count for both. So they ask them, do you want to convert and take this as an ARRT candidate? What would you all say?

KATHLEEN DROTAR: Yes.

JAMES FUTCH: It's the national registry. Of course you want it to count for the national registry. They will not accept you being licensed by the State of Florida first by endorsement into a national registry license. You will have to take that test again. Same test. You will have to take it again if you want it to count for ARRT if you don't pick ARRT to begin with.

The next thing that happens is, because of some changes that have happened over the years, and I think this is in the contract, we don't find out about the results once you do that from ARRT. They're not going to send us your score.

Hopefully, in talking to ARRT, certainly by the time we get to the next contract, we will have them put in some language, perhaps, so that they say, hey, we will still send you the scores to your state if you want us to, if you release them to the state for, for that purpose. But that's an improvement for the future.

Anyway, that's the, the larger 30,000-foot

view. So hopefully, out of the next month or so, certainly by the time of the next meeting, we'll have a pretty good idea of what else can be done to fine tune things inside the system on the state side, and the program directors will have a better idea of how to handle things on their side if there is a better way.

KATHLEEN DROTAR: So most --

DAYLE MOONEY: And James, I don't want to steal Evalee's thunder, but that you just discussed right there, that distinction between basically the translation of what happens at ARRT when they apply and as a national certified license, licensee, over to Florida, that changes the nature of our application type down here.

So if you've applied for a temporary, then you would need to either withdraw your application or send us some amendment so we could change your application type, move the money over; do a whole bunch of things on our end. That probably is our number one. And so I think that the suitability question that we're trying to ask here for those applicants that are telling us that they want to apply by examination, is are you currently scheduled to take your ARRT exam or have you already taken it?

And if you answer yes to that question, then we're gonna say, you may want to back up and apply by endorsement then, so that we're not changing the type.

Yes, then the applicant will need to tell us if they will need to prove to us that they are currently ARRT certified by sending us their certification, we can go check their certification status and we do that. And if we have any trouble, then we would talk to the applicant and see if they can provide us with that documentation. But we believe that that will fix probably our biggest hang up with licensing for Rad Techs.

KATHLEEN DROTAR: So what happened in the past is when we first went electronic with the applications, our instructions were to apply by exam. And that changed probably about five years ago, and so we're telling people to do it by endorsement now. But, you know, what you see on your end is another story.

DAYLE MOONEY: Well, and it gets really confusing for people, I can tell you, because it's, it's kind of a drop down screen and they get to go pick. So in the stress of the moment, or just have forgotten what they had been previously instructed,

mistakes will happen. And people will say, I'm taking an exam, so I need my license by examination. And not necessarily drawing those distinctions between the definitions that we have at the state versus what is national versus what's common knowledge on the street, because we all speak different language.

KATHLEEN DROTAR: True.

JAMES FUTCH: Another thing that changed some years ago, this was not as much of a problem when this conversion to state candidate happened, because there is a national site that all the states can see ARRT test results and not have to depend upon it straight from the, from the applicant.

And we used to see the results from anyone who had a Florida address would show up there, even if they converted to ARRT. But I figure, or I feel at some point, legality, the lawyers on the other end probably said, oh, that's not the best idea.

If we can somehow talk to ARRT so that we actually still get those, and again, my thought is, can you please just ask them in this process where you're electronically saying, converting over to an ARRT candidate, you know, by doing this, do you wish to have your scores sent to Florida. Then it would

appear in that, in that site and we'd be able to easily find them and finish the process on the, on the exam side.

We must have talked about everything. There's nobody saying anything. Oh, wait a minute. Chantel has a question.

DAYLE MOONEY: Evalee, I think we kind of took a tangent. Did we cover everything that you wanted to cover?

JAMES FUTCH: I think so. We have a council member who has, or had a question. Did we scare you away, Chantel?

CHANTEL CORBETT: No, no, no.

JAMES FUTCH: She can't hear you. Try the mic.

CHANTEL CORBETT: You're assuming that. I can talk loud.

The question is whether if you have a current radiological technologist license and you're seeking a second license category. Is that now available online or are they still have to submit those on paper? So if they have a nuclear medicine license and they're now seeking their CT license.

JAMES FUTCH: By the way, this is Chantel Corbett, our nuclear medicine technologist council member.

CHANTEL CORBETT: Candidate.

DAYLE MOONEY: So I believe that that is an online process. I mean, it's a paper process currently, but we are looking to enhance and I'm going to reserve the right to correct myself between now and two weeks from now if that is inaccurate, but my, if my memory is serving that, yes, unfortunately, it is still a paper process to add a modifier to an existing license.

CHANTEL CORBETT: Is that considered a modifier or a second license?

DAYLE MOONEY: It would be. If you're adding it to a previous license, then you -- then it would be an addition. There's some that you can add sometimes, James.

JAMES FUTCH: Chantel, I'm sorry. I missed the category that you asked. What was the situation?

CHANTEL CORBETT: If they're nuclear medicine already and you're adding CT.

JAMES FUTCH: And you're adding CT. Oh, I see why you're asking that.

CHANTEL CORBETT: Because it's very unclear.

DAYLE MOONEY: It's unclear what the underlying license is.

JAMES FUTCH: It should be considered an

additional license because what you're talking about with --

CHANTEL CORBETT: What's what I thought.

JAMES FUTCH: -- the full CT is to do the full diagnostic imaging, not just the coefficients for laying nuclear medicine data in the --

CHANTEL CORBETT: Right.

JAMES FUTCH: -- landmarks of the body.

CHANTEL CORBETT: Correct.

JAMES FUTCH: So they won't have that -- that's why it is an additional license. It should appear as CT on the license when they're done.

CHANTEL CORBETT: Correct. But the problem right now, it's only provided by paper, so it's still a longer process. I didn't know if that was in the works to put that availability online or not.

JAMES FUTCH: We'll have to take a look.

EVALEE TAYLOR: The modifier for recent transactions is available online, but our system does not allow for someone to apply online for the same, we'll call it profession code. So if someone already has a license and applied online, it's not going to allow you to apply online for the same type of license.

CHANTEL CORBETT: Right. And the type of

license --

EVALEE TAYLOR: It's the same as an expired applicant.

CHANTEL CORBETT: Right. When you're saying the same type of license, that's everything under the ARRT umbrella, correct?

EVALEE TAYLOR: Yes.

JAMES FUTCH: So ARRT's are in the profession code 7601 and radiologic assistants, for example, like Rosevelt, they're in 7602.

CHANTEL CORBETT: Yeah, because we've had a couple people had their applications in and --

DAYLE MOONEY: However, the ability to do anything that you need to do with your license is, including, you know, applying for things, additional licenses that are legally authorized for you to have, is on our list of requirements for the next licensure database that we have just contracted a vendor for and should be having a system replacement in the next -- you're going to kill me when I say this because it seems like it's so on down the road, but it's really not -- the next two to five years.

CHANTEL CORBETT: I was going to say ten.

DAYLE MOONEY: So we, we have a selected vendor. The State's gone through a very, very

public process in order to find a new vendor to replace our current licensing database and that individual has just been selected. I have not seen the system, myself. We went through some extensive -- well, a wish list and want list and demand list was. And what I'm told under very good authority, by people both on the licensing side of the house and on the tech side of the house, is that we're gonna get all of our wants and all of our demands.

The entity has been retained and we are moving very quickly now. Their timeline, we said, we're ready to roll this out in five years. And they said, well, we'd like to do it in a year and we said, hold on just a minute. We're talking about millions of licensees. Can we find a happy compromise so we're not rushing the process too much? But we're getting it done as quickly as possible.

So I do think that we're gonna see some enhanced capabilities in the very near feature and I think we're already looking at ways that we can do business more efficiently in the interim with the system that we have.

JAMES FUTCH: And Dayle, that system would

cover everybody in the room that's a licensed health care professional, right?

DAYLE MOONEY: Absolutely. And it shouldn't look any -- well, it should look easier for anyone that is a current licensee. But we're not talking about, you know, obviously, there's not going to be any additional work that's necessary. We will do all of the data migration from one system to another and, you know, the roll out to the, to the licensees should be minimally impactful and then the next time you go to renew your license, it should just be easier. And the next time that you need to go do something for your license, it should be easier. And things should, should be better. There's a lot of shoulds in that sentence, though.

JAMES FUTCH: It sounds like dollar signs to me, but --

DAYLE MOONEY: It's a very high-dollar project and rightfully so. I mean, this system maintains the livelihood of a whole lot of people.

JAMES FUTCH: It's part of the deliverables and I'm sure every executive director will ask you this, will you be able to apply more than once online before you have to go to paper or will you go to paper at all?

DAYLE MOONEY: Certainly was our hope and on our wish list and our demand, kind of on our demand list, we want to be a paperless system. We don't want to receive things in paper. We don't want people to have to mail us checks and money orders and download paper applications if they choose or want to.

We will always -- I think we're always going to have to have the ability for people to do that, but we certainly want everyone to be able to apply online. That's what our preference is. We don't like paper applications.

MARK SEDDON: I have a question. So for -- do you guys provide segmentation of our data regarding clean versus applications with problems? And also, if you have a -- as far as how long it takes for somebody. Obviously, like you mentioned before, you know, like three days' turnaround for a clean application versus, you know, ones with problems.

I'm curious for those applications, those problems where they have to resubmit numerous times, if there's categorizations of, from new graduates versus people from out of state, how that looks as far as what their timeframes are.

DAYLE MOONEY: Um --

JAMES FUTCH: Mark, do you mean from a reporting standpoint?

MARK SEDDON: From a reporting standpoint.

DAYLE MOONEY: We probably could get that information. You know, it's certainly something that we can -- we don't routinely segment our data that way. We, we very likely could do an ad hoc report and ask for that level of data. I'm not a hundred percent sure how helpful it is.

Our anecdotal information is that we probably see the same number of new grads versus out-of-state endorsement applications that are -- and because we have new grads that are applying by endorsement, it's difficult to really -- once you get to endorsement versus licensure by examination, I can't distinguish from someone that is an out-of-state licensee that is truly endorsing in, or a recent graduate of a Florida program that has national certification that is applying by endorsement.

MARK SEDDON: Because anecdotally, again, this is not about data, is we hear, at least across my facilities, that out-of-state applicants taking significantly longer to be processed. So I was just curious if you guys had data on that or not, so --

DAYLE MOONEY: I don't have that level of data

currently. We can look and see, but again, I'm not sure that we're gonna need -- because it's endorsement, I can give you -- I can ask them to run me reports off of a transaction type. So if it's licensure by endorsement, I can get that level of data. I don't -- I can't readily or reliably subdivide that data down to say this person was an out-of-state educated individual that's coming in.

I will say that there are, probably anecdotally, there are a lot of people that come in that don't, because they don't have Florida program directors that are assisting them in the application process, that they don't give us copies of licenses, they don't give us their national certification, they don't give us copies of their driver's license; they forget their Social Security number. There are quite a few deficiencies in those applications. I don't know if they're any more than the number of Florida graduates that apply by examination when they want to be -- when they should be endorsements.

MARK SEDDON: And that was my point is just is there a way to identify what -- or is there really a problem and what -- whether it's a commonality for the out-of-state folks, but it sounds like you do have some awareness of that, so --

JAMES FUTCH: I also wanted to say, by the way, that was Mark Seddon, the medical diagnostic nuclear physicist from Advent Health, one of the council members in the nuclear physicist position.

All of us, I think, as council members, if, if you need any help or assistance or other information, we're always happy to bring it back to the council. This particular council is very available to us in between.

And I saw a second ago somebody said our meeting was five minutes away from closing. Also lunchtime. So I just want to throw that out in case you disappear entirely, that's what happened.

I wanted to thank you for coming and for doing this and really looking forward to the meeting with the program directors on -- later this month.

Something that Mark was saying. I'm trying to think, for people who are applying -- we were not covered by the Mobility Act, which passed last year, which would've, I think, probably resulted in, in a much greater improve of folks not being able to be certified who were coming in by endorsement, so we're very fortunate in that.

And the big game is town is ARRT and to a certain extent, NMTCB for the nuclear medicine

folks. Other than the fact that people who are coming from other states tend to be older and in the profession for a longer period of time, they might have difficulty finding some of those old documents, that's about the only reason it might show it. But in the new system, Dayle, hopefully there will be excellent mechanisms by which to track data on deficiencies and nail it down, you know, like we do trying to go look anecdotally to see what's going on from looking at the --

DAYLE MOONEY: I mean, we have data on our -- we have data on deficiencies, like, what our top ten deficiencies are, but they're -- it's not, not as easily segmented out as what we're looking for here.

JAMES FUTCH: Sure.

DAYLE MOONEY: I have a note and we'll see if we can't get to that point and if we do, we'll certainly report back here and so we can share that information out.

JAMES FUTCH: Anyone else have any questions for Dayle or Evalee or both or the process in general?

Ladies, do you have anything else to ask us or can share?

DAYLE MOONEY: Evalee, did we hit all your

bullet points?

EVALEE TAYLOR: Yeah. I mean, as long as everybody got their questions answered and most of the things, most of the sensitive data James wanted to be included and presented, if everything was touched on, I'm good on mine.

JAMES FUTCH: Okay. Well then, thank you very much from the group. And we look forward to seeing you at future meetings and we'll say goodbye now.

MARK SEDDON: Goodbye.

JAMES FUTCH: Thank you.

DAYLE MOONEY: Thank you. Bye bye.

KATHLEEN DROTAR: So on that mobility law last year --

JAMES FUTCH: You can shut it down, Josh.

All right. Sorry, I'm going to give a big exhale right now. That this actually worked.

KATHLEEN DROTAR: Yeah.

JAMES FUTCH: There's a lot to be said about hybrid meetings and getting sound to go back and forth. But that was, that was very good.

I'm sorry.

KATHLEEN DROTAR: That's okay. No, on the mobility thing, a lot of credit goes to FRS for assisting with getting to the right people to get

that language removed for, for radiologic technologists.

JAMES FUTCH: And at some point in the future, they may come back with the second bill from last year, which was the fingerprinting. Fingerprinting background. I think we're one of the few that's not included in that.

KATHLEEN DROTAR: Yeah.

JAMES FUTCH: And that may be coming in the future.

KATHLEEN DROTAR: That's not a biggie.

JAMES FUTCH: All right.

MARK SEDDON: All right. So I know we want to adjourn for lunch or --

LISA GAVATHAS: We have a rain band coming, so if we want to walk to lunch, we might want to go pretty quickly.

JAMES FUTCH: Did you bring an umbrella? Sounds like noise.

LISA GAVATHAS: I didn't bring one. Right now it's dry. I just walked over there. I walked down through the grass and it was fine, but --

JAMES FUTCH: All right. So bring your galoshes and your umbrellas.

LISA GAVATHAS: I told them we'll be there

like, by 12:15, so --

JAMES FUTCH: We're coming back when?

MARK SEDDON: We're coming back at 1:30. Everyone make sure you'll be back here by 1:30. The room will be locked while we're gone.

(Proceedings recessed at 11:56 a.m.)

(Proceedings resumed at 1:25 p.m.)

MARK SEDDON: All right. I guess we can go ahead and get started. It's almost that time, if that's okay. We have everyone here. That way we can get done in time.

So we'll go ahead and start with Lisa to do the radiation machine update.

LISA GAVATHAS: Okay. I'm not going to take up much time because Mark has to talk for a while. So mine is going to be really short.

JAMES FUTCH: Mark just said take all the time that you need. Go right ahead.

ADAM WEAVER: Take all day.

MARK SEDDON: Take as much as you want.

JAMES FUTCH: Especially since I don't have his presentation on here yet.

LISA GAVATHAS: Okay. I'm going to take these off because I can't read.

I'm going to start with staffing. First of

all, we hired someone in my place. It was the environmental health program consultant who was the MqSA coordinator for the State, and that is Camilla Guy. I think probably all of you have met her at one of our previous meetings. She filled in for me a few times. And she's very hard worker. Really good.

We also have some really bad news. Tracee Strohman. I don't know how many of you have talked to Tracee. If you've done any registration through the state, you've probably talked to her at some point in time. She retired. She's now going to Maine, like, for the summer. And maybe she'll see Glen. But we're -- we were going to try to reclassify the position, but it got -- the reclassification got put on hold, I'm told. So I guess we'll be hiring another Admin Assistant 3 to be in her place, but it hasn't been announced yet.

We also have -- Camilla has vacated the ES3 position, the Environmental Specialist 3 position, so we'll have that advertised soon. I think that one is going to be advertised pretty soon. And we have one contract worker right now who's assisting with data entry and that's somewhere we've been real behind for a while because we've had a lot of

training of new staff. So anyway that will give us a full house.

So for the number of facilities, as of last Friday, we had 21,110. The number of tubes as of last Friday was 66,411. And for an update on our online payment system, 44 percent of all payments came in on the online payment system and it worked wonderfully. And we've been really pleased with that. Hopefully, the percentage will go up next year. We'll see.

But we've collected 96 percent of the total that was invoiced back last August. So there's always that percentage that doesn't pay due to possibly closed facilities and what have you.

We've had no new medical events reported since the last meeting, but we had one overexposure, which was an interventional radiologist and it was after the year, his badge from the fourth quarter, he went over five. And I think it was 5.9ish. So -- and they wrote a report and submitted it.

The MqSA contract, usually we start doing a modification process by May or June, but I was informed by the FDA that the contracting department has been eliminated; therefore, we don't know when the -- when or who is going to modify our contract

or how it's going to be modified. We haven't -- we're submitting an invoice. We haven't submitted one since that department was eliminated, so we're hoping we also get paid.

And now a current issue that we've had, this is just one that's going to -- that Mark is going to follow up on, I think, but it was a -- it came in from a -- it wasn't anonymous, I don't think. It was [INAUDIBLE]. Actually, a Rad Tech called and said that we had an issue at a facility in Miami that they, they were offering free low-dose CT scans. And we found out there were four, four facilities that are offering. It's a facility that you go in to get your free low-dose CT calcium scores. And they offer full body scans, colonographys, which I didn't even know existed, and a few other additional scans. They'll do abdominal scans, whatever you want.

They do not accept insurance. They do not have a doctor present, and they print the report from a software and hand it to the patient. So this is currently one of the things that we're doing an investigation on. And Clark's smiling at me, so I may not be able to say much more than that.

THE WITNESS: Well, let's say they don't

consider them patients.

LISA GAVATHAS: Well, this is true. They're clients, I guess. So this is something that we're working on right now.

JOSEPH DANEK: Do they have -- what are they trying to get out of this, do you think? There's got to be something -- they're trying to expect something.

LISA GAVATHAS: Money.

JOSEPH DANEK: Because you say it's free.

ADAM WEAVER: The first CT is free.

CHANTEL CORBETT: Yeah.

JOSEPH DANEK: Oh, yeah, okay. There's the hook.

LISA GAVATHAS: The full-body CT, they will then try to talk you into, I think it's $3000. And in the areas that it's located, there are people that would pay that.

And there's even a police department that is on board with it. They are, they are hoping that all of their officers go and have all of these scans done.

CHANTEL CORBETT: Are they having -- have they given any pamphlets, let's say, to these clients about radiation exposure?

LISA GAVATHAS: Well, we did, we did send in inspectors to all four facilities on the same day, along with an MQA investigator. And so we've got a lot of notes on it. So right now, it's -- we're trying to decide where to go with it.

CHANTEL CORBETT: Pending.

LISA GAVATHAS: Doing some checking online, we found another couple facilities. One in particular in this area that's possibly doing the same thing. There's no physician or -- now, there are Rad Techs there that are pushing the button, but they're not getting the order from a physician. They're getting it from an intake person who asks a series of questions and says, okay, you're a perfect candidate. They walk them over to the machine; the Rad Tech takes the x-ray or the CT.

CHANTEL CORBETT: No contrast.

LISA GAVATHAS: No contrast, no. So if you have any questions --

KATHLEEN DROTAR: Didn't we have this come up before?

MARK SEDDON: We discussed this --

KATHLEEN DROTAR: In Tampa, wasn't it?

MARK SEDDON: Yeah.

CLARK ELDREDGE: That facility did have a

physician.

KATHLEEN DROTAR: That's right.

CLARK ELDREDGE: They had a physician that writes the script.

CHANTEL CORBETT: I was going to say in this case, if they have a script from a physician, that would be a different animal.

LISA GAVATHAS: If they had a script, but also the Rad Tech cannot give them the diagnosis or whatever. I mean, that's -- you had a question.

NICHOLAS PLAXTON: I was going to say Clark was talking about this at lunch and like, you know, like I was at a recent women's health clinic in the last, like a fair, I guess it is, and like, it was like in the last month over in St. Pete. And I was walking around just looking at the different booths available. I think there was, like, two or three booths that did the same thing, where they said -- I kind of like what? The whole body scans, you know, like that type of thing. I didn't look into it any further than that.

I was kind of wondering the same thing. I mean, maybe they have a doctor that's behind all that, I don't know, or somebody that's licensed to do that. But the machines obviously weren't there

at the fair, but it will probably send you to one of these places.

MARK SEDDON: Because you have self-pay, it eliminates a lot of the constraints because usually, it's your insurance reimbursement that kind of controls access. Since none of that is involved, it's kind of -- it just goes up on regulations.

LISA GAVATHAS: They fly under the radar.

MARK SEDDON: It's under the radar. It's only regulations if there are any. And they don't always apply directly, so it's not quite clear.

NICHOLAS PLAXTON: Got it.

LISA GAVATHAS: I feel like it's another DEXA situation, but we're upping our game to CT.

NICHOLAS PLAXTON: Yeah. I think they even had, if I'm not mistaken, they would have like a little menu. You pay, like, fifty bucks for this type of scan and it was just, like, yeah, cash, I would say.

ADAM WEAVER: They advertise it in the newspaper, too. The paper comes out every month.

NICHOLAS PLAXTON: Do they?

MARK SEDDON: To get a work up done. That's what a lot of executives do, a lot of companies, like Publix does it where they pay for their

executives to have a whole work up done. There's still a physician, but they do, like, whole body scans and echos and --

CHANTEL CORBETT: Right. Especially for guaranteed money.

JAMES FUTCH: Lisa, if I remember right and feel free to correct me, we weren't saying there was anything untoward or unsafe; that they were competent at what they were doing. It was just there wasn't a tie in to a medical need or any determination that had been made by. It seemed like it was driven by, basically, like a survey or something that you fill out.

LISA GAVATHAS: Right. They ask a series of questions when you walk in. You sit down and they ask you, they ask -- I actually called to ask what questions you ask. And they asked, do you have a family history? Do you have this or, I mean, they asked me a series of questions. Oh, you qualify. You should come in. And it -- and if you have a partner, bring them in, too, because I'm sure they qualify as well.

JAMES FUTCH: And they --

NICHOLAS PLAXTON: Who wouldn't qualify as long as you have cash. I guess unless you have an

extensive medical history, they're like, yeah, we don't want to -- they want just people with nothing.

LISA GAVATHAS: Right. And they do say if they find something, like your calcium scores -- I don't know anything about calcium scores, sorry, but if they are high, then they will recommend that you see someone and if you don't have a doctor, they will recommend one for you.

ROSEVELT NHEIK: Are they using -- is AI interpreting this software?

NICHOLAS PLAXTON: Probably.

LISA GAVATHAS: Software. Yes, AI --

NICHOLAS PLAXTON: Because the calcium scores.

MARK SEDDON: Yeah, it's an algorithm.

JAMES FUTCH: I think it was the relationship between some of the communities that they have sought clients from have incorporated into the marketing, like, you know -- I won't say this is the case in this, but, you know, if you have a population of professionals who come and they all get examined and, you know, one person is found to have an issue and then, you know, upon referral, they go back have something done about that, that's viewed as the positive result of doing all of the scanning for all of the, all of the --

LISA GAVATHAS: We got a lot of information from the reviews and the reviews told more, I guess, than actually going in and -- well, you always look at reviews, right, when you do anything; if you go into a restaurant. And so that's how we found out a lot of information when we get complaints from outside. And they would -- there was one review that a girl took her mother in. Her mother insisted that she go. And she took her in and she said it was a marketing scheme. That they took them back into a back room, and all they did was try to pressure her mother into having a scan or full body scan. Well, she, her -- she told them no, that she didn't want her mother to have a full body scan. So they left and they called her mother back by herself. So they wouldn't allow her in the room the second time, to try to pressure the mother into having a full body scan so --

ROSEVELT NHEIK: Like selling a condo.

MARK SEDDON: Timeshare.

ADAM WEAVER: Timeshare.

ROSEVELT NHEIK: Timeshare, yeah. Isn't this like the x-ray shoe thing, you know, in the shoe stores situation?

JAMES FUTCH: That's an interesting societal

comment if you think about it because in certain other parts of our office where we have citizens who are concerned about things like background radiation levels in their house, perhaps due to previous use of the land, or just concern like that, you're talking extremely low levels. And the common perception of radiation exposure, I think we've all been exposed to it growing up in American society, is bad, bad, you know.

So I'm -- it's just, it's an interesting thing for me to look at it and go, well, gee, where did that go in this? How did that not factor into what normally you would think would factor in. But again, they said low dose, right?

LISA GAVATHAS: They say low dose, which low dose, we can segue into other CT issues.

MARK SEDDON: Actually, I wasn't going to talk about this.

LISA GAVATHAS: You weren't? No? That's a big issue now, CT dose causing cancer.

MARK SEDDON: Yes, I was going to mention that article.

LISA GAVATHAS: Okay. Sorry.

JAMES FUTCH: One thing, before you leave that particular issue, because you mentioned

technologists. In ARRT code of ethics practice standards, whatever you, whichever document, and in Florida, administering radiation without authorization from a licensed practitioner is an enumerated type of unprofessional conduct in the regs --

LISA GAVATHAS: Right.

JAMES FUTCH: -- for Florida.

CHANTEL CORBETT: So do you go after the technologists that are working the tube, I'm assuming?

SEAN WILSON: Because technically, x-ray techs work under the supervision of a --

JAMES FUTCH: General supervision.

SEAN WILSON: -- under the supervision of a licensed medical doctor that prescribes the dose.

CHANTEL CORBETT: The doctor wouldn't have to be there to do the x-rays, but they have to give an order.

MARK SEDDON: The order has to be valid.

JAMES FUTCH: That has to be authorized, whatever form that takes.

LISA GAVATHAS: Aren't they supposed to record the dose of each patient and to keep it on file?

CHANTEL CORBETT: I was going to say the

software should do that.

MARK SEDDON: The accreditation for this type of thing. There's no reimbursement, there's no joint commission or anything like that.

CLARK ELDREDGE: Now, Florida Statute Section 404.22, paragraph 8: A human being may be exposed to the use of beam of radiation only under the following conditions: For the purpose of medical or health care if the licensed care -- the licensed health care practitioner operating within the scope of his or her practice, has determined the exposure provides medical or health benefit greater than the health risk posed by the exposure, and the health care practitioner uses the results of the exposure in the medical or health care of the exposed individual. So --

JAMES FUTCH: You have two different statutes. You have the machine side in 404, which also covers, as Clark mentioned, slightly more than the machine itself, obviously. And then you have 468, which was set up specifically for the people who are administering this.

I think the path out of this is basically, if I may be frank, if it's a profit-making enterprise, the road to more profit in a stable fashion is to

find a doctor who will authorize all of these things.

CLARK ELDREDGE: And in our scope, the physician then has to review and provide the results to the patient. They cannot -- there has to be a physician who the person, during this exposure, is the patient throughout. We wouldn't care if a doctor believes his primary care deserves that every one of their patients should have an annual full-body CT because it's in their best healthcare management. I mean, that's within their purview. But for someone who's not a practitioner to authorize a CT, that's a violate -- that's practicing medicine without a license potentially.

JAMES FUTCH: If I remember your descriptions from when we talked about this earlier, everyone involved in this says the patient authorizes this.

CLARK ELDREDGE: And the patients aren't permitted to authorize it per statute and per rule.

JAMES FUTCH: That was the answer you got when the inspectors asked the question of the people involved, was the patient authorized it and they show you the form and the patient filled out the survey form.

CHANTEL CORBETT: Self-referral is basically --

it's a self-referral at that point.

LISA GAVATHAS: It's a self-referral.

CLARK ELDREDGE: The only self-referral permitted under Florida codes is mammography.

MARK SEDDON: Because it's a self-pay, that kind eliminates a lot of the --

CLARK ELDREDGE: Yeah, there's no checks and balances, per se.

MARK SEDDON: Yeah, that's a problem, obviously. Self-pay is not a medical facility so you're kind of -- all the checks and balances normally in place wouldn't happen.

CLARK ELDREDGE: That's why somebody could operate for a couple years and you don't know about it.

MARK SEDDON: At least they're registered, right?

LISA GAVATHAS: No. Two of them.

CLARK ELDREDGE: Two of them were.

ADAM WEAVER: Two?

LISA GAVATHAS: Two of them and two of them have tried. One has tried to register since then.

CLARK ELDREDGE: Because they found out during the inspection they weren't registered, so they submitted it and it will be processed appropriately

within the response to this activity or this investigation.

LISA GAVATHAS: We're working on responses at this time. That's all I have if you have any questions from x-ray.

CHANTEL CORBETT: I think that's all I can think of.

MARK SEDDON: All right. Anything else for Lisa? No. All right. Thank you, Lisa.

Do you have a question?

CHANTEL CORBETT: So we did have one that was under a RadOnc or a therapy registration that had some diagnostic units under it, and I guess that used to be okay or the way it was okay? And then now they're wanting those separated out. Under their own registration for the diagnostic units. Is that --

LISA GAVATHAS: In a hospital setting?

CHANTEL CORBETT: Outpatient setting.

LISA GAVATHAS: Outpatient therapy is usually under a different -- it will be under TH.

CHANTEL CORBETT: So if we find more of those that are combined, go ahead and separate them out?

LISA GAVATHAS: Go ahead and separate them, yes.

MARK SEDDON: I think another trend we're seeing is you guys requesting authorization use for all therapy centers. People at older facilities. Those are missing, right? A lot of you have --

LISA GAVATHAS: A lot of those people are missing. Yeah, you can send it in. We probably have something on file. If not, we will redo it and backdate the authorization to the date that it was originally authorized.

MARK SEDDON: A lot of facilities that have been out there for a long time, they change ownership and change management. A lot of people can't find those. But now the newly trained inspectors are asking for that when they go to sites, radiation therapy, and a lot of places don't have those available, but you can reach out to Lisa and they will provide --

LISA GAVATHAS: Yeah, that's fine.

MARK SEDDON: -- those prior. Another thing, clarification, I guess is also, regarding information number four, regarding the weighting factors for line badges.

LISA GAVATHAS: Yes. So weighting factors, in our regulations, it states that if you -- that anyone can utilize weighting factors if it is an

approved method. If it's not something that's recognized, you can submit for our approval the method and it can, you know, we can look at it and approve it or just whatever.

But before, you were having to send in for specific doctors. It doesn't say that anywhere in the regulations that you had to -- can only do it for interventional radiologists. We find that a lot of interventional radiology are using a lot more help in the, in the room. And if you feel that they need to be -- that they're going to be assisting closely, they probably need it, to be using it as well.

But EDE 1 and EDE 2 are approved methods. If you use that -- one of those two methods, then you do not have to submit something for approval. But what we suggest is you put something in the radiation protection program that says, we -- for any user, operator that is using -- that will be using weighting factors or EDE calculations, we will notify them, they will sign something and at the end of the year for their yearly exposure, it needs to say how their EDE was calculated.

MARK SEDDON: But so one thing, because I think a lot of folks may have been previously approved on

the older version of this --

LISA GAVATHAS: Mm-hmm.

MARK SEDDON: -- back in the day when it was Dawn and Phillip and them. But if you can't find your original approval letter, you should request -- I think it's in the notice, itself.

LISA GAVATHAS: No. You just need to put it in your radiation protection program that for any user that, that uses -- well, Clark's going to be arguing with me.

ADAM WEAVER: If you're using the standard methods.

LISA GAVATHAS: Okay. Clark.

MARK SEDDON: At the bottom of this notice, it says something that's -- the very bottom.

LISA GAVATHAS: If you use an approved method, that's what it says in the regulations.

MARK SEDDON: If you're unable to find a copy of your approval letter, you should resubmit your request.

LISA GAVATHAS: Where does it say -- that's in --

MARK SEDDON: That's in the actual notice that's on the website. That's a new thing that wasn't on the draft that was initially sent out,

which is catching people off guard.

LISA GAVATHAS: Yeah, I didn't see that one.

CHANTEL CORBETT: That's what it used to be.

LISA GAVATHAS: I haven't even seen this.

CLARK ELDREDGE: Registrants who have already adopted method of correcting exposure to external radiation fields and unable to find a copy of their approval letter, should resubmit their request according to this information to obtain an updated approval letter.

MARK SEDDON: Yeah. Because a lot people have the old letters from, like, twenty years ago or maybe not.

CHANTEL CORBETT: So the question really is, do you want hundreds of letters --

MARK SEDDON: Do you want those letters --

LISA GAVATHAS: No, I don't want.

CHANTEL CORBETT: -- coming your way or do you want us to be okay with using the standards.

LISA GAVATHAS: What does it say? This is like the -- those are recommended guidelines, information notices.

MARK SEDDON: Okay.

LISA GAVATHAS: It's not regulation.

CHANTEL CORBETT: Okay. We'll go by the

regulation that says if they're using standard, we're good.

CLARK ELDREDGE: Where's the approval?

LISA GAVATHAS: Pardon?

CHANTEL CORBETT: The approval is the regulation.

LISA GAVATHAS: It says in the regulations that if you use a calculation method for approval, for calculating your EDE, approved method, you do not have to -- I mean, you can, that anyone can use an approved calculation. EDE 1 and EDE 2 is in NCRP --

MARK SEDDON: 122.

LISA GAVATHAS: 122. No.

MARK SEDDON: NCRP 122 method. There's another one, too.

SEAN WILSON: It's in the new reg, 8.40 as well.

LISA GAVATHAS: What was the first -- what was the other?

MARK SEDDON: 122.

LISA GAVATHAS: EDE 1 and EDE 2?

MARK SEDDON: Oh, that one was actually older. I can't remember. But NCRP 122 has a new, has a new calculation.

LISA GAVATHAS: Okay. Well, then that's an

approved method. I would say if it's approved by NCRP. I don't know. Clark may have a different opinion. Clark is my boss. I have to do what he says, so --

SEAN WILSON: If it's approved by 8.40, recognized in the new Reg 8.40, is that not an approved method because they recommend the use of those three different methods, EDE 1, EDE 2 and then a --

LISA GAVATHAS: Third method.

JAMES FUTCH: Would you like to take this under advisement for a future council meeting?

LISA GAVATHAS: Yes. That's a great idea. We might need to talk about that more. If everybody would think about this and put their two cents in, you can e-mail me.

MARK SEDDON: Thanks. Any other questions for Lisa?

JAMES FUTCH: I didn't mean to set off any discussion.

LISA GAVATHAS: Thank you. I better take notes.

MARK SEDDON: I thought it was something that had come up recently, so I just wanted to get clarification on it.

ADAM WEAVER: New inspectors.

MARK SEDDON: New inspectors. A lot of new inspectors. So that's the other thing, too. A lot of inspectors for a lot of folks out there probably seeing a lot of new questions, which aren't really off from the regulations. Just that it's a current -- it's the view of the regulations from somebody new in the field, so they're fresh.

ADAM WEAVER: They're looking at the dosimetry report and go, I don't think this is correct and how.

MARK SEDDON: Yeah, exactly. And they're asking for like, where is your approval letters? Where's your authorization to use for new --

LISA GAVATHAS: I didn't read that part in information letters. I don't know if I have -- I guess it's the one online.

MARK SEDDON: Yeah, the one online.

LISA GAVATHAS: Another thing, if you have facilities that need a shielding plan and you don't have one, you can contact, like, if you get a new facility and you don't have a copy of the shielding plan, a lot of times we will have the old shielding plan. Sometimes it's handwritten, but I would be happy to provide it. Because I have a lot people

that call and say, we just bought this building. It has a vault and we're putting a new --

CHANTEL CORBETT: Right.

LISA GAVATHAS: -- Linac in it. And so -- and they -- I mean, a lot of times, the facility, if it's been abandoned, they don't have -- they didn't leave the shielding plans behind, so you can call.

CHANTEL CORBETT: Right.

LISA GAVATHAS: And we don't have them all. Maybe they weren't scanned in, but we do have some older ones. Some that were back from the 80s, early 80s.

MARK SEDDON: All right. Any questions for -- it may be a future discussion point. Maybe -- I think Rosevelt mentioned AI. So where AI is going in imaging interpretation, it's really -- it's exploding right now for those who are involved. It's like -- we don't really have to have a lot of physician oversight because everything is done automatically.

CHANTEL CORBETT: With remote technologists.

MARK SEDDON: Remote technologists, that's another thing.

JAMES FUTCH: If anybody sees anything from a company, or they, themselves, want to give a

presentation, we'd love you to bring it.

MARK SEDDON: Yeah, I think that would be good. Off topic.

LISA GAVATHAS: We've had a lot of requests from operators, especially with CT, that they want to use remote operators. We say, yes, they can as long as there's another CT operator in the room, which defeats the purpose.

JAMES FUTCH: Is anyone in the imaging field -- how do I say this. From several years back, the question was inartfully put, radiologist versus AI. Radiologist using AI. Does one replace the other and how many decades. Is it anywhere close to that?

KATHLEEN DROTAR: A recent article, yeah.

ROSEVELT NHEIK: Well, from what I've been gathering, it's the -- they're saying that, I heard, is that if the radiologist who doesn't use AI will be replaced by the radiologist who uses AI.

KATHLEEN DROTAR: A recent article that I came across just said that it was, it was helpful. You can't have one without the other yet, but that it's enhancing some of the things that radiologists might not necessarily pick up because of the algorithms that get used.

MARK SEDDON: A lot of the algorithms now, I

mean, up to like finalizing the report, is basically all automated within, like, image captured to within six minutes they have a report and they have action care path given where scheduling the patient. You have to have that physician -- one piece still remaining is having physicians sign off. So if you talk to any of the big companies, that's sort of what they're pushing as this is how it is going to be very soon. And think back just a handful of years ago, this didn't exist. Now it's across multiple modalities. Like, if you go to RSNA or any of the big image -- that's all it is. Like half the vendor hall is all AI.

ALBERT TINEO: Oh, yeah.

CHANTEL CORBETT: Yeah. You have the telereaders, you know, that can now do twenty sign offs in the time that they used to be able to do, like, two or three reads. You get paid per read.

MARK SEDDON: Yeah, so it's rapidly changing. Some of them we probably need to pay attention to from -- because it goes back to what Clark was mentioning before, like interpretation of reports and things like that.

CHANTEL CORBETT: Well, I mean, MR is obviously one of the ones that's not --

ADAM WEAVER: It comes back who is going to pay for it. The insurance companies.

JAMES FUTCH: The patient.

CHANTEL CORBETT: And the remote technologist thing is getting --

MARK SEDDON: MR is the one area that remote technologists is still, that's become a hot topic.

CHANTEL CORBETT: Right, and it's going to be an issue with safety, I think, before anything else.

MARK SEDDON: Yeah.

KATHLEEN DROTAR: It's been a very hot topic at ASRT meetings, there's a lot of back and forth. It comes down to what you just said, there has to be a real technologist in the room with the patient having the scan.

MARK SEDDON: Right. Very true. All right. I guess we jump over to -- I just want to talk a little bit about CT. This is just an aside. It wasn't really intending to be a whole topic. Raised as a curious thing to -- James? So I apologize if it's really hard to see, but I actually have it on my laptop so I can see it.

JAMES FUTCH: Tell me what part you want to see.

MARK SEDDON: So anyway, a couple things for

CTs. So actually, slide number two if you want to real quick. Go back to it. Yeah.

So referring back to what Lisa was saying about, you know, last month, there was an article in the -- from the folks out of UC San Francisco. Rebecca Smith-Bindman and those folks.

This is sort of -- they're the ones who created the strong CT doses a number of years ago, right? The ones that created all the, like I went to DC -- I was on the board at that time with DCM for some stuff and discussions about CT, how much of a concern this is, that tied back to some of the CT neuro injuries occurring.

But their article that came out last month that created a bit of a stir. You may have seen it. Is they're just restating that the study that they had, found that currently, based on current utilization, radiation dose levels, based on CT exams in 2023, would result in over 103,000 future cancers, over the course of the lifetime of exposed patients and that if that, if the practices continue, that CT could account for five percent of all new cancer diagnosis annually, which is very alarming.

But it's not really based on new data or new information. Just the same data they've been

presenting for the last few years, right?

So I just want to bring this to peoples' attention that this is something that did recently come out. ACR, AAPM, a lot of different folks came out with sort of responses to this. Basically saying it's not new data. This is something we're aware of. There is obviously a risk of radiation when you're exposed to anything. CT is one of the higher sources of radiation across the imaging modalities. Obviously, the younger you are when you're exposed to radiation, the higher perhaps chance of risk of cancer.

And that, that is just a chart from the article. It just shows that as the younger you are, the higher your percent risk of cancer. The younger folks don't get as many CTs as older folks do. Left to right, that's age and then on the left side is your risk of cancer and right side is number of CTs. It kind of indicates that as you -- when you're younger, you're very sensitive to radiation so obviously, any CT will result in a higher risk, relative risk, versus somebody who's older and you get exposed to, to a CT.

But the -- but AAPM, I mean, basically, we've known that this is true. The way that we do CT is

based on appropriateness, right? And that's the key thing is like only appropriate studies should be performed. Going back to what you're saying, a CT is a higher exposed type of modality so we have to make sure that only appropriate studies are being performed.

So utilization of CT has gone up because it's more available, but then also using it in the proper or appropriate time is also being focused.

Another thing that is important to be aware is the data that they're basing their risks on are old data and not really valid. The assumption the risk from CT scan is the same as somebody who's sick as it is for somebody who is healthy is not quite valid. So the risk of not having a CT study is higher than the risk of a CT study.

So if you're sick and you have a CT study performed, there's a reason why you're having it done because it's diagnosing something. So if you don't have it done, there's a greater risk to you as an individual as a patient, versus the small risk for the actual radiation from the CT.

So this is just an awareness. I mentioned it to James if they had -- they were aware. I guess Lisa, you had some call for that perhaps. So

there's a more -- anyone else seeing this as an issue across your practices?

ALBERT TINEO: Yeah, we have some patients.

MARK SEDDON: Patients are concerned.

ALBERT TINEO: Concerned.

MARK SEDDON: And how are you guys responding?

ALBERT TINEO: Our response is very -- just similar to what you say. If it's, if it's appropriate and your physician believes it is appropriate, then --

MARK SEDDON: Right. If there's a need for it.

ALBERT TINEO: The other portion of this was, new, new CTs now are better, lower dose than the older CTs. So that is also given in information to the patient. And say, as technology has evolved --

MARK SEDDON: Correct. Technology has improved over the last ten years.

ALBERT TINEO: Less of a risk, but it's still a risk. But we just tell them, if your physician is appropriately sending you to have something done, then it's probably right.

MARK SEDDON: Right. The CT numbers have increased significantly over the years.

ALBERT TINEO: Yes.

MARK SEDDON: That's really a lot of the

concerns, right? Utilization of CT is probably overly, not conservative, but overly -- physicians are overly conservative, so they order CTs to rule things out. But, you know, if it's justified, it's appropriate, then --

ALBERT TINEO: Right.

MARK SEDDON: -- it's a huge benefit.

CHANTEL CORBETT: I think at the hospital level, we find a lot of education, especially ER units for the doctors, just educating them on, like, really checking to see if that patient already had CTs recently, if they can use that data, if they need to have another one done; that kind of thing. So that education has gone a long way as well.

JAMES FUTCH: I wonder how this gets factored into the patient self-referral for nonmedical.

KATHLEEN DROTAR: It's low dose.

CHANTEL CORBETT: You know, you have x-ray techs who have the knowledge and understanding of radiation, or should have the knowledge and understanding of radiation, who are worried about their own exposure being super high when it's not. Versus, you have the public, who doesn't have the education and they see low dose and they're like, okay. Let's go do this. Let's go pay. So you have

people all over the map as far as education and understanding and, you know, low dose in my head versus your interpretation, you know, is dramatically different.

KATHLEEN DROTAR: I was really being facetious.

JAMES FUTCH: Another thing for another meeting, so thank you for --

ALBERT TINEO: Nice seeing you.

(Albert Tineo leaves council meeting)

DAWN SHEPARD: In the past, the number one surgery was exploratory surgery. I think CT has taken that spot where we, you know, basically the exploratory surgery has, like, fallen off the map. We're not doing those anymore. So in some ways, like, we're saving lives because we're not opening people up to exploratory surgery because of CT.

LISA GAVATHAS: Do we know the difference in dose between a regular CT and a low-dose CT?

JAMES FUTCH: Is low fat the same as low dose?

LISA GAVATHAS: Is it a lot lower, is it --

JAMES FUTCH: Well, looking at that graph too, because like you said, you've got the cancer incidents on the left and number of CTs on the right. Is there anyone that correlates cancer incidents with dose from the CT actually or do they

not?

MARK SEDDON: No. I mean, they don't really have that because it's --

JAMES FUTCH: Okay.

MARK SEDDON: Well, they have assumptions based on epidemiologically.

JAMES FUTCH: You don't have --

MARK SEDDON: You don't have -- there's no actual study that shows that a CT scan directly causes a cancer, right?

ROSEVELT NHEIK: That's pretty much kind of impossible.

ADAM WEAVER: You would need too big of a population to consider that.

NICHOLAS PLAXTON: There's too many factors.

ADAM WEAVER: There's too many factors.

MARK SEDDON: Yeah, you can't do that granularly.

SEAN WILSON: Not only that, but there's a -- that data is from 2010. It's report 160. Since 2010, we do not see a five percent increase in cancers reported by the American Cancer Society, so the direct correlation is there's no evidence of it anywhere.

MARK SEDDON: We're not seeing evidence

anywhere. I think Nash came and gave a talk here back when that first came out. But, yeah. So I think it's, it is of interest and, but going back to your low doses terminology. And there are, like, for lung screening, there's, like, criteria for low-dose CT scans, but when you're just making, saying low-dose scan, anything says low-dose scan. What does that really mean?

ADAM WEAVER: There's no definition of low dose, acceptable approved definition, what's a low dose?

MARK SEDDON: They have one for lung scanning. There are some categories they do actually define to, to meet that criteria. But if it is, they're using a low-dose calcium score, whatever, that's just --

ADAM WEAVER: Low dose is such a wide range and, ages and body masses and whatnot.

ROSEVELT NHEIK: And what about image quality, too? A lot of the low-dose stuff that I see is kind of non-diagnostic. It's like a double-edged sword. They have to get another CT.

ADAM WEAVER: They're not getting a good benefit.

LISA GAVATHAS: They also get the low dose.

They're selling them the whole body on top of that, so that's not good.

ROSEVELT NHEIK: Exactly.

MARK SEDDON: So the other piece, this is something that, so CMS has, it is effective in 2025 and people are kind of catching up to this. Required reporting is 2028 or 2027, sorry. But there's a requirement that for reimbursement, that it's a new, ACqM, a quality metric that you're tracking excessive radiation dose and image quality for diagnostic CT for adults. So this is a new requirement.

So hospitals, all hospitals for CMS requirement, are required to provide the percent of CT exams in adults which surpass the established limits. It's interesting because the person who establishes limits are the same group that published that paper we just were talking about out of UC San Francisco. And these limits are pertaining to a size-adjusted dose versus the global noise value across 18 categories, which are in the bottom left corner there, your most common categories of CT exams. The patient, inpatient, outpatient and also for physician reimbursement.

So the first one is a requirement is

outpatient. So every outpatient facility in Florida that does CT on adults will be required to report this in 2027. It was actually to be reported earlier, but they moved it back a year because realizing people aren't going to be able to keep up with this. The initial steward of the metric is actually a company called Alara, which is owned by the same group out of UC San Francisco that published the paper that just came out about CT doses. But -- so you have to have a dose-monitoring software of some type or at least, most of the centers have the dose from the scanners available. You submit your data to them, the software vendor, that will go ahead and translate it and give you scores on all your patients for both CT noise and also the dose. Size-adjusted dose. And then you can report that back out to CMS for determining your reimbursement for the subsequent year.

So for 2029 payment, you'll be submitting two quarters from 2027. That will be submitted in 2028. That's how everyone -- so you're probably going to hear, if you're not aware even aware of it, but this is questions coming up recently because initially, it was supposed to go in effect for 2025 and they've been pushing it back for a lot of people to meet

this new requirement.

For those who use, like, an HR, there's different ones out there, the bigger ones, they're the ones who have to collect the metrics and put it out and so they're all working with these different software vendors to figure out how it works.

CMS did provide a clarification recently this year. Actually, a month ago, two months ago, that you don't have to use that software. We realized now there's other metrics, other ways of doing it so they're some dose monitoring or dose management software systems that have already been capturing and providing you your CT noise data, as well as global noise data, you can use them to report out your data as well. You don't have to use the Alara company, although a lot of folks were initially told they did. That's not true anymore.

So this is something else that's out there. So this tied to the other CT article that just came out, is raising a lot of awareness on CT dose, CT noise and going back to what, where they're saying, you know, obviously, if you go too low a dose in CT, you're starting to impact image quality and you have to have review studies, which is a problem for those folks who are pediatric facilities and you have your

report to Leapfrog, right? That's another one of the metrics out there for pediatric facilities. You have to report. And that's focused only on your CT dose.

So if you are above the 50th percentile, then you are considered non-compliant and you score lower. So everyone has been slowly reducing and reducing your pediatric doses for CT and increasing, increasing your noise in those subsequent exams. So your image quality is going down, which for maybe in a pediatric hospital where you have pediatric radiologists who are used to reading through all the noise, that's okay, but for most facilities, that's not okay for their physicians. It causes a lot of repeat. So a lot of folks are pulling out from Leapfrog reporting the CT dose.

NICHOLAS PLAXTON: Actually, I can speak to that. I actually read to, I read for, like, my main reading is for Bay Pines for veterans, right? I also read for Florida Cancer on the side and as well as All Childrens in downtown. And so it's interesting because the Florida, the VA has stayed the same pretty much, even though we do try to decrease the dose. But the image quality stayed pretty good.

The Florida Cancer I've noticed, the image quality has definitely gone down because they're trying to get the lowest dose possible. And like, it's to a point where now, the contrast is almost like there's no contrast. And I'm like, this is kind of a, are they going too far in my mind.

MARK SEDDON: Right. A lot of folks are finding that that's the case. They've gone too far.

NICHOLAS PLAXTON: Yeah. But you still read pretty safely. But the kids, it's a whole another realm. When you go there, that's like it's really -- you have to be kind of comfortable reading that because it's, it's real grainy. And you really kind of, even with the PETS, it's interesting because they're using the absolute lowest dose they can use.

MARK SEDDON: Again, it goes back to the younger you are, the more sensitive you are to radiation, but there's a point where you are too low.

NICHOLAS PLAXTON: Over time, yeah.

MARK SEDDON: There's a point where you're too low.

CHANTEL CORBETT: You have to find that happy spot. You still have to have enough quality image,

like you said, where you're not repeating studies because at that point, you doubled it anyways. So you're better off to bump it up a little bit, get a better quality doing it one time versus doing it twice.

MARK SEDDON: Yeah. And that's what I mean. So this -- the intention of this balancing the dose with CT noise is what the target should be for clinicians. The way they're doing this one is not, not ideal. It's a little strong arm with one pathway. So it's a little, you know, but, you know, it is -- the intention should be, you want to balance your dose with your image quality. Have some way to standardize what you're looking at so you can kind of set your protocols and make sure you're giving the patient the appropriate. Because this is very granular, right? This is for every individual patient, there's a noise in the dose for every single study. So it's not like in general terms, this is actually, you're actually analyzing thousands and hundreds of thousands and millions of studies.

As you can imagine, there's a lot of data floating around out there that is now, all these IT, all of these companies are looking at it as an

issue.

So all right. I know Clark stepped away, but any questions about --

NICHOLAS PLAXTON: I just want to say one more thing.

MARK SEDDON: Sure.

NICHOLAS PLAXTON: Like now that I've assumed the RSO because of DOGE at my facility, there's like a, there's like a -- we had a patient that comes in, they want to know their whole lifetime exposure. So that's kind of interesting, because obviously, the newer scans have all that data caps, you know, captured. So you just look into whatever scans they have done and it adds up. If anything before that, you have to kind of manually calculate how much, you know, figure out what studies they had done, when, and that's not including outside the system, you know. So it's kind of like, it's kind of interesting because if you're using one system and then you switch to another, I mean, like the tracking system is going to be -- I see that being a problem in the future going forward.

MARK SEDDON: Right. A lot of folks are hesitant about lifetime dose. Lifetime exposure as being something you want to provide. It doesn't

really make a whole lot difference.

CHANTEL CORBETT: There's just too many unknowns about previous studies out there.

MARK SEDDON: Yeah, apples and oranges.

SEAN WILSON: Risk isn't cumulative. It's individual.

MARK SEDDON: Exactly.

NICHOLAS PLAXTON: Yeah. I mean, it's probably the best way to approach it. I mean, a lot of this stuff is theoretical. You don't know if there's no threshold that says that you're going to get cancer.

ADAM WEAVER: You can have acute and a certain high range you're not going to see in medical.

NICHOLAS PLAXTON: Yeah, correct.

MARK SEDDON: Gambles policy, is that the term they use?

SEAN WILSON: Even with this, you don't have to use the Alara program. But the variability between the Alara program and all the other algorithms that are out there is significant. And so, what is the utility of reporting all this? That's still going to be in question. You're going to have to know --

CHANTEL CORBETT: You'll have to report apples to apples.

SEAN WILSON: You're also going to have to

report the method by which you calculated this.

MARK SEDDON: Yeah. Because the limits that they have established are based upon using Alara to calculate the noise and the size of the specific dose, which is proprietary to their software. So they're not sharing that with other vendors in the system out there, so everyone is sort of guessing, well, what, I can't compare to what.

CHANTEL CORBETT: There should be a base formula. You should be able to apply that across the board.

MARK SEDDON: Sure.

SEAN WILSON: The Hounsfield unit. There's a formula for Hounsfield unit. There's a formula for noise.

MARK SEDDON: The global noise index is something that is very variable based upon which vendor you're looking at, so, all right.

I know, Clark, you want to talk a little bit about --

CLARK ELDREDGE: I've got a couple things here, but since we're talking about dose, let's continue with that.

MARK SEDDON: Okay.

CLARK ELDREDGE: NCRP Report 184, if I'm

remembering my number correctly, was updated.

JAMES FUTCH: Do you want this?

CLARK ELDREDGE: No, I don't have anything to show. Was an update to -- okay. Population of the U.S. Is that 160? I don't remember anymore.

SEAN WILSON: 160.

CLARK ELDREDGE: So it was the medical update, 160, it was -- it showed how going to electronic sensing and whatnot, that doses were actually going up because, you know, oh, that makes such a pretty picture. Let's tweak the MA a little bit more. And then.

SEAN WILSON: Dose creep.

CLARK ELDREDGE: Yep, dose creep. And then image wisely and gently came along and 184 said, hey, we're on downward slope. Well, we're coming up on the ten-year anniversary and NCRB has started the process with AAPM, ACR, CRCPD. Who else was at the meeting? To start reevaluating dose to the public.

So as part of that, ERC inspectors will be going to facilities to get, part of their inspection will be collecting dose information. Some will be based on the actual measurements used for our equipment; others will be based on reviewing physicists reports. And any other -- and data for

facilities that have -- I have to say this right. Set up dose monitoring programs or the -- seeing what their protocol dose for different studies are.

So in collecting that data, along with the inspections. And they will be getting that data from the facilities will be submitted up to CRCPD, who will then massage it and hand it over to NCRP. So this will be going on, requesting all states to, through CRCPD, to cooperate with this project. And so -- so that's coming.

Data collection may be starting soon. It will be discussed at the CRCPD national meeting this coming week in Tucson.

Another thing that came around this legislative session, to switch topics, was Senate Bill 832 and House Bill 585. They actually made it through all the committees. Senate Bill 832 was actually rolled and bounced between the chambers and I guess leading with the final at the end, it died in messages because of various additions to it.

But this is a bill related to lands previously mining phosphate. And the purpose of the bill was to eliminate strict liability for the presence of natural radioactive materials.

So the idea there was just because there was

uranium in the soil or radium in the soil, did not make it a liability for the --

JAMES FUTCH: Landowner.

CLARK ELDREDGE: -- landowner. Actually, not the landowner. Going back to the mining company. Because they were the ones -- strict liability concept, I'm not a lawyer, nor do I play one in the meeting. But my very poor lay understanding was the strict liability is going back to the original source. What put it there to begin with. It's the fact that the source actually exists is what the liability is based on, not on actual exposure, not on actual harmed caused, but the fact that there was a hazard created or hazard present or potential hazard present is strict liability.

Then you've got higher levels liability where it actually takes people to cause something. You actually make some actual enhancement or something with knowledge or whatnot type thing. So that was, again, it certainly looked like it was a -- the goal was to reduce that strict liability for the mining company; and therefore, potentially, the initial developer of the property.

Now, to eliminate this, to eliminate this strict liability, the bill required that the owner

of the land list it with -- list that the land was previously mined for phosphate with the local, on county, somehow connected to the actual property deed or the property information. It also required that the Florida Department of Health to provide a free survey of the property.

JAMES FUTCH: Just the gamma.

CLARK ELDREDGE: Just the gamma, a gamma survey, one measurement per acre.

ADAM WEAVER: One per acre?

CLARK ELDREDGE: One per acre. Now, mind you, the setback side of this, it also said if the landowner did not think that the measure the department did was sufficient, that they could have them come out and do a second measurement.

CHANTEL CORBETT: Still for free?

JAMES FUTCH: There's no mention of cost.

CLARK ELDREDGE: In any of this. No method of fees collection, reimbursement, anything of all this.

Now, for the -- if there was to be a lawsuit, somebody suing over the radiation exposure, they were going to have to hire a certified health physicist, or a member of -- come on. NR, NR, RPT. National Registry of Radiation Protection

Technologists, and they were actually going to have to do a MARSSIM Study.

ADAM WEAVER: A MARSSIM Study?

JOSEPH DANEK: Who would be doing this?

CLARK ELDREDGE: A MARSSIM Study. A certified health physicist or a --

ADAM WEAVER: NRRPT.

CLARK ELDREDGE: NRRPT.

JOSEPH DANEK: I know, but who is getting the CHP or the NR?

CLARK ELDREDGE: The lawyers who are over the liability.

JOSEPH DANEK: The property -- the lawyers for the property.

CLARK ELDREDGE: The lawyers for the client who's suing over it.

CHANTEL CORBETT: Right. The complainant.

CLARK ELDREDGE: So basically, this is a case where lawyers came into town, right? This is not too long ago. Got people in the development concerned about the radiation exposure from -- because they're on phosphate mining lands. Got some of them to sign on to sue the developer, which used to be -- which developer was actually the mining company that mined the land and then stopped mining

and started -- became a development company developing all the lands they previously mined.

LISA GAVATHAS: Can you explain the MARSSIM Study?

CLARK ELDREDGE: It's an EPA thing, multiagency radiation survey and site investigation manual is MARSSIM.

ADAM WEAVER: A lot of surveys.

JOSEPH DANEK: It sounds pretty complicated.

CLARK ELDREDGE: It's a statistical method of taking a bunch of different samples a lot of different ways and evaluating the risk from that. So that basically kind of set a standard that we would have to meet as Department of Health. And looking at what the costs were and things like that, and we were thinking that if it was -- we were to do a one off, because the other part about -- just the, in the landowner any time could request a survey from us. So there was kind of a disconnect here so that any subsequent landowner could request a survey for free.

JOSEPH DANEK: Yeah, but you are doing one measurement per acre.

CLARK ELDREDGE: Right. Well, or at minimum. So let's go and say a neighbor, let's say that

because this is open ended, that it becomes part of real estate. And every property in Lakeland, in Plant City, in Riverview, in Mulberry.

ADAM WEAVER: Yeah. Anywhere near phosphate.

CLARK ELDREDGE: A place that was previously mined for phosphate, they decide that prior to the sale, they better get that survey done to be able to have a report hand ready for -- so the fact that what, a year ago, was a really slow real estate year, right? Supposedly. And there was still 1200 real estate transactions in Lakeland and 800 in Bartow and area and I forget, yeah, looking this up --

ADAM WEAVER: You guys will be really busy.

CLARK ELDREDGE: We could've been. And then we were looking at it and if we were doing a one off study, right? Somebody just called us up and wanted us to do a one off, that was going to cost us more like 450 bucks, $480, something in that range, for us to actually go out with people because they were coming from Orlando; the driving. When we do these type things, we send out two people.

ADAM WEAVER: At least you're not making the inspectors do it anymore.

CLARK ELDREDGE: This would've been the

environmental measurements folks. The ones doing the pre and post mining.

ADAM WEAVER: We used to do it when I was an inspector.

JAMES FUTCH: Depending on the workload, you may be doing this for a long time.

CLARK ELDREDGE: Right. Well, to actually do, for one measurement, when we looked at it was going to be, was it 14? No, 24, excuse me, 24.2 FTE years to survey the 680,000 -- no 550,000 acres.

JAMES FUTCH: That's what has been measured or historically what's been mined?

CLARK ELDREDGE: Well, that's two different figures. The 550 I think is historical because, there's an estimate of 800 square miles that have been mined and are subject to mining. And I can't remember the --

CHANTEL CORBETT: Does this include the water covered areas?

CLARK ELDREDGE: Well, there is some of that, but separating those out, you have the settlement ponds.

ADAM WEAVER: Those are very difficult to survey.

JAMES FUTCH: Yeah. Well, think about gross

gamma from what surface? Are we talking -- what distance are we talking? How are we measuring that exactly? How are we maintaining -- can we go back out and repeat the same measurement and get the same answer? I mean, theoretical with the MARSSIM level of involvement yes, but I don't --

CLARK ELDREDGE: So with discussions with John Williamson, who is our administrator for environmental, we were discussing about how we would have to do some sort of gridding on each acre to take samples.

JAMES FUTCH: Short inspectors, tall inspectors.

CLARK ELDREDGE: -- and take measurements and combining them into a single level in each acre. But, you know, that's -- because currently, when a homeowner, concerned homeowner calls us for their own property, we generally grid it, the outside, and then do walk through the house and find the hottest spot and record that when evaluating someone's home.

So we're going to have to adopt something like that because otherwise, they have an excellent, you know -- anyway, the fact it went through so far -- so well, you know, it doesn't mean it won't come back next time.

ADAM WEAVER: So it wasn't -- the bill wasn't finally approved.

CLARK ELDREDGE: The bill was passed by the Senate; taken into the House. The House basically adopted the Senate one once it was passed because they beat it to them. Whatever. But then the House added a rider extending liability. There was a whole additional legal liability language for unrelated stuff added to the bill and it went back to the Senate. The Senate said, no, we're not going to let you do this. You need to think about, sent it back to them saying, please remove your extra language and we'll be fine. But the clock ran out.

While the current session is to be extended, supposedly the extension is only for consideration of budgetary matters, but you never know.

JAMES FUTCH: If that gets accomplished, it will be good.

CLARK ELDREDGE: Yes, that would be wonderful if they pass the budget.

JAMES FUTCH: You may be reading stories about Florida government being shut down, in which case --

JOSEPH DANEK: What's the bill numbers again?

JAMES FUTCH: Bill numbers --

CLARK ELDREDGE: 832.

JOSEPH DANEK: I'm sorry. Can you repeat?

CLARK ELDREDGE: 832, 585.

JOSEPH DANEK: Yeah, 585. House bill?

CLARK ELDREDGE: House bill's the odd. Even is Senate.

JAMES FUTCH: It's easier remembering it the other way around.

CLARK ELDREDGE: House is always -- I'll let you say that.

JAMES FUTCH: I knew the guy who came up with that.

JOSEPH DANEK: 832, 585?

CLARK ELDREDGE: What's our time?

JAMES FUTCH: You're 15 minutes past me. 2:30.

MARK SEDDON: 2:30.

JAMES FUTCH: New business is at 2:45.

CLARK ELDREDGE: I guess we will --

JAMES FUTCH: Go ahead.

CLARK ELDREDGE: Okay. Sort of some discussion here if anybody's got input. We all know that in the medical field, the use of radiation, it's been well established. The philosophy that you're determining there's a need and the use for the radiation exposure, and you've evaluated the risk and determined that the medical benefit outweighs

the medical risk.

In jails and other facilities where they're starting to use, where they've been using transmission x-rays for several years now to search people for contraband being brought in, there is no formula, no protocol for that sort of evaluation.

So, excuse me. I'm trying to remember what it was earlier that I was thinking about I was going to ask for comment on. Because I'm currently a chair of a national group, CRCPD, that is actually looking into this issue and coming up with a -- so at this point, the proposal or draft language, is basically that they have to perform some -- in order to adopt this, that you should be doing some sort of evaluation, looking at your data of what you're trying to prevent and what the risk is.

Obviously, you know, with radiation exposure one death outweighs a whole lot of dose. One shiv smuggled into a security place, you know, that will -- but the actual issue is demonstrating that the methodology and the, the individuals --

MARK SEDDON: Benefit.

CLARK ELDREDGE: -- benefit, individuals being scanned are actually at risk for that. You know, the desire to scan anybody walking across a security

line. The issue of using transmission x-rays to scan for surface -- hidden items rather than internal. The issues of if you're scanning the whole body with a transmission x-ray, you're only interested in one area, why are you scanning the whole body with a transmission x-ray? You should only be scanning the one area. So I guess that's one question.

ADAM WEAVER: Well, isn't it, isn't it possible they could be implanting it, themselves? I thought that was one of the reasons they did the whole body.

LISA GAVATHAS: They wanted to scan everyone that walks through the --

ADAM WEAVER: Yeah. I'm just talking about the inmates. Someone who wants to bring something in. They could implant it or have -- that's why they wanted to do whole body rather than just the lower abdomen.

LISA GAVATHAS: Do you know what the number one thing is they're looking for for scan, when they're scanning, are cell phones. They say that's the worst thing that they can bring into the prison system because that keeps them in touch with the outside world and they can run gangs. I can't imagine having -- I won't say that for the record.

ROSEVELT NHEIK: People are creative.

ADAM WEAVER: Use your imagination.

CLARK ELDREDGE: Well, I'm not sure -- I hadn't heard about the implant thing before.

ADAM WEAVER: I thought I've seen that, that was a long time ago when someone had, like a skin flap purposely -- so I don't know if it was on the chest or the back.

CLARK ELDREDGE: Interesting.

ADAM WEAVER: Yeah. That could be old.

CLARK ELDREDGE: And the question is, is any of the -- I guess microwave, would microwave, the various back scatter techniques detect that or not. If the skin's enough to do the back scatter.

ADAM WEAVER: Depends on how thick your pocket, how much skin is in front of the object, you know, type of thing. All right. So what did you want comments on?

CLARK ELDREDGE: Any thoughts about, any thoughts about, yeah, because one consideration was, yeah, again focusing on if you're -- it is if, rather than using transmission x-rays, do you need -- first of all, if you're only interested in one part of the anatomy, you just focus transmission on that.

Mind you, if you're having to do, if you're looking at the entire GI tract, is the dose difference, really the difference to do the whole, you know, if you really do the whole GI tract of somebody, what's the difference doing that and the whole body practically.

ADAM WEAVER: Well, I guess they could swallow it.

CLARK ELDREDGE: Actually, that was a big thing looking for tea bags and swallow it. Well, with inmates going -- with people going back into the fully controlled area where you have the ability to pass things. So that's one thing. With those folks, when you're already giving a whole organ dose, dose to all the organs, the extremity dose for doing the other things is, you know, not significant.

ADAM WEAVER: The equipment manufacturers provide dose estimates for --

CLARK ELDREDGE: That's one of the other things. With evaluating the hardware -- well, the devices are -- yes, they're doing dose estimates because they're limited to 25 --

ADAM WEAVER: Millirem.

CLARK ELDREDGE: Micro.

ADAM WEAVER: Microrem.

CLARK ELDREDGE: For scan. So the dose levels are quite low. I mean, they're actually -- currently, limits are below public, dose to the public for annual. Doing the 50, 25, come on, do the math. I should have my notes in front of me.

MARK SEDDON: Is it daily?

CLARK ELDREDGE: No, no. This is annual.

MARK SEDDON: You don't have to scan on a daily basis.

CLARK ELDREDGE: Or multiple times a day.

MARK SEDDON: Multiple times a day. So probably the math works out where it's --

ADAM WEAVER: It's probably in the millirem, to sum it all up. I don't know. I haven't looked at the standard in a long time.

CLARK ELDREDGE: If I was online, I could pull it all up because that actually was something I was thinking about talking about initially.

MARK SEDDON: Okay.

NICHOLAS PLAXTON: They probably wouldn't have to be scanned every day, though, right?

CLARK ELDREDGE: No, no. Well --

MARK SEDDON: Every time they enter.

CLARK ELDREDGE: Every time they enter. So if

you've got somebody on work release.

NICHOLAS PLAXTON: Oh, yeah.

CLARK ELDREDGE: And they're also looking at the guards and scanning them.

NICHOLAS PLAXTON: Oh, yeah.

MARK SEDDON: Or visitors.

CLARK ELDREDGE: Or visitors. FDLE or, excuse me, DOC has backed off on scanning all visitors at the moment. So they're just currently doing inmates.

MARK SEDDON: Yeah.

NICHOLAS PLAXTON: Those are the ones you're worried about giving the inmates the --

CLARK ELDREDGE: But at the same time, they can scan the inmates going back behind the line --

NICHOLAS PLAXTON: Yeah.

CLARK ELDREDGE: -- so that's --

NICHOLAS PLAXTON: Yeah.

ADAM WEAVER: Yeah. Doing the guards or other personnel who work in the facility.

CLARK ELDREDGE: I'm somewhat amazed for the descriptions of, in a room like this, with people watching, where people are able to pull things out of orifices and insert them into other orifices. And I'm just --

JAMES FUTCH: Okay.

(Laughter)

ADAM WEAVER: That's going to be an interesting risk/benefit analysis.

NICHOLAS PLAXTON: It's like a magic show.

MARK SEDDON: All right. James Futch.

JAMES FUTCH: Technology update. Two main things. One, radiologist assistant. We have spoken to ASRT. This is a long-standing issue. I've spoken to the lawyers. Rosevelt and Kathy separately have spoken to ASRT, pulled out the document that's the practice standards for the Rad Assistants. We have asked them for the things that we would need to make sure that can be put into our rules. We asked them for permission because it's copyrighted material. And also, we have to post it on the Department of State's website, the rule to incorporate it by reference.

So they're talking up their chain to see what exactly it is and how we should ask for that. Hopefully that won't take very long at all. I wouldn't think so. They must be asked this all the time.

The intention is to replace -- I should show you the rule, right? That's not it. Why am I still

showing that? I don't know why that's still showing. There we are. I'm sure that helps.

Anyway, this is the section we're talking about in the existing regulation. This is where we currently have incorporated the rule delineation from 2005, which is super specific. And so, what's going to happen is, we're trying to just simply replace that with a practice standard.

Talked to the lawyers on our side; they said, yes. This is fine. Let's go ahead and try that. We're not going to do anything with the entry level clinical activities. This is all based upon previous discussions with the counsel. The rule delineation is in modern times called the entry level clinical activities. The practice standards is what we're trying to get to put here, and that discussion is ongoing.

If we get good answers from ASRT, and the next step is to do a notice of proposed rule making. And, excuse me, notice of proposed rule development. And we can probably have the language already at that point. And there's no timeline I have for when that's going to happen, but once it does, my reference point for the most recent rule of equivalent size that we're able to get through in

the same regulation 64A-3, two plus years.

So I would like to be able to say that soon it will be completely out of our hands and into that thing between us and when it makes its way out of the other end of the regulatory sausage-making process. Appreciate your help and support in all that. All the trainings are running on the right track. It's just a matter of getting the appropriate okays for, for it to move forward.

CLARK ELDREDGE: Now you're at -- you're saying that we're, that we're looking to request the ability to post the actual?

JAMES FUTCH: Yeah.

CLARK ELDREDGE: Is there something changed in 120 or something that says we can't hold a copy at our offices and a copy with the Department of State for review?

JAMES FUTCH: We can. That's not how we did it last time. In fact, if you go look at this very regulation for all the other types of technologists, we have the actual document incorporated by reference and it is on our website. And that's -- that was a whole different group of people back then. So I think maybe some folks have changed the ASRT site. I don't know.

KATHLEEN DROTAR: What's happened with ASRT is that the standards, instead of being specific to each individual discipline, now it's by whatever the practice is. And then it incorporates all of the different ones under this section under use of, you know, use of whatever. And then it's for each individual. So that's the problem.

JAMES FUTCH: Right. We've moved past that.

KATHLEEN DROTAR: Oh, good.

JAMES FUTCH: We being me in the discussions with our lawyer does not think that's going to be problematic. So we'll just go forward and, and if something stops along the way, then we'll find out about it as we go along the way. That would've been optimal, but that's why we're sitting here a couple years after starting to do this, because that's just not going to happen.

What I was going to talk about and Clark was talking about was the mechanics of incorporating some of the other groups' stuff into our stuff. We started off asking for the way we did it the last time where we get the copyrighted material and they give us permission to put that in our material, and I suspect they may not want us to do that anymore. I think what they want us to do is, which seems

logical, which is why don't you just reference the link on our website and incorporate the link by reference and the answer is Chapter 120 doesn't permit that because when they changed their regulations on site, our regulation would change and the regulated entity would not have a bite at the apple to object to whatever ASRT's current standard is, having changed in the original in between when we adopted it.

It's a lot bureaucratic stuff. The news is that we're moving forward with it and maybe by the fall, we'll have some sort of -- it will be somewhere along the way that I can tell you it's somewhere along the way.

Let's see. What else?

KATHLEEN DROTAR: Can I pose a question?

JAMES FUTCH: Sure.

KATHLEEN DROTAR: So in view of it could take two years or more, so --

JAMES FUTCH: How long did it take you to get where you're at with yours?

KEVIN KUNDER: The first part of it published?

JAMES FUTCH: Yes.

KEVIN KUNDER: At least six years.

KATHLEEN DROTAR: So when the standard changes?

JAMES FUTCH: Right.

KATHY: Will that be --

JAMES FUTCH: No, it starts all over again.

KATHLEEN DROTAR: It starts all over?

JAMES FUTCH: That makes logical sense. That's not what our Florida Chapter 120, Administrative Procedures Act allows. It makes sense so if we adopt what is now --

KATHLEEN DROTAR: Yeah.

JAMES FUTCH: You know, X, it's a beautiful, you know, blue baby whale. Okay. We adopt it today by reference with the group that says this is a beautiful blue baby whale on our website and we go through the process and two years from now, after it's adopted, they change the blue baby whale to an ugly rattlesnake or something. I don't know. You never got a chance to say, I don't want to be governed by an ugly rattlesnake. I liked the beautiful blue baby whale instead. You never got the chance, as the regulated entity subject to the blue baby whale, to object to the change to the, whatever I said, ugly rattlesnake. So that's why that's not possible.

KATHLEEN DROTAR: Okay. Thank you. So the other part of that is, do we need to wait until that

happens to look at the other modalities?

JAMES FUTCH: Clark, when do I retire? Four years, right? Sooner than that, so -- his viewpoint is much shorter. No. I would, I would not ever wait for something.

KATHLEEN DROTAR: Like that to happen.

JAMES FUTCH: No. You're going to be sitting here a couple years. Why did we wait and not just move forward with something? My best guess --

CLARK ELDREDGE: The Department is currently working on a -- actually, it's almost ready to go to publish, a clarification on the use of mobile devices. Because a, a group petitioned us for rule making.

JAMES FUTCH: All righty. So I don't have anything else new. And it is time for us, I think, to discuss, Mr. Vice-chair, three minutes. I'm sorry. Does anybody have any questions?

MARK SEDDON: Any other business or questions for James regarding scope, technologists practice?

ADAM WEAVER: No, nothing.

MARK SEDDON: All right. So do we want to look at next meeting, potential dates?

JAMES FUTCH: You have a September and an October in the back of your packet, as well as, of

course, you have your phone.

MARK SEDDON: Right. I'm sure someone has the Gator schedule. That's usually what people --

ADAM WEAVER: (Laughing)

JAMES FUTCH: If at all possible, normally we end up going in the month of September, that is I'd say the second week, sometimes the third week. I would, I would respectfully recommend, if at all possible, if the group could decide upon, for example, the first full week of October, which is --

ADAM WEAVER: The 6th?

JAMES FUTCH: Tuesday is the 7th in this calendar.

MARK SEDDON: Yeah.

JAMES FUTCH: So if we would like to hear from the radiation safety officer at the Kennedy Space Center for that talk that we told you about, he needs to have it happen the beginning of the next fiscal year for the feds. So the 7th would be ideal, or the 14th or the 16th. That's a Thursday. And I toss that out. Does anybody have anything going on those dates that would be bad or good?

JENNIFER PETERSON: I like the 7th.

CHANTEL CORBETT: The 7th would be good.

JAMES FUTCH: Dr. Peterson says the 7th.

MARK SEDDON: Sounds good.

ADAM WEAVER: Good or bad?

JOSEPH DANEK: Sounds good.

JENNIFER PETERSON: Good.

ROSEVELT NHEIK: Hurricane season starts to wind down then, too.

ADAM WEAVER: October 7th or 8th?

JAMES FUTCH: The 7th is a Tuesday. That was only a suggestion.

CHANTEL CORBETT: October 7th.

JOSEPH DANEK: October 7th.

ADAM WEAVER: Fine. I'm seeing that as a Wednesday.

MARK SEDDON: It's a Tuesday.

KATHLEEN DROTAR: The calendar is wrong.

MARK SEDDON: It's misleading with the way the numbers are.

JAMES FUTCH: You've got to look at the boxes.

ADAM WEAVER: All right. Never mind.

MARK SEDDON: All right. We're not voting or anything. Technically, we're agreeing without a vote. We're going to do the Tuesday, October 7th, as the next meeting.

KATHLEEN DROTAR: Sounds good.

MARK SEDDON: All right. Is there anything

else? Any other business? Any items, agenda you want to bring up?

I know we talked about the nurse practitioners before, but I think we're okay with that. James, did you want to bring up --

JAMES FUTCH: Go ahead. So nurse practitioners, I think, was an older topic. We talked about performance of --

MARK SEDDON: Fluoroscope --

KATHLEEN DROTAR: Yeah.

JAMES FUTCH: -- fluoroscope. With regard to 468's authority, with regard to our Chapter 468, which is the Rad Tech licensure, it exempts anyone who is, quote, a licensed practitioner as defined in that statute from being subject to the Department's regulation. So underneath licensed practitioner is a list of allopathic physicians, MDs, osteopathic physicians, chiropractic physicians, all sorts of any different way you can think of the word physician.

And then at the very end of it it says or someone in -- I'm paraphrasing -- or someone who is otherwise authorized by law to practice medicine. And a number of years ago -- and we don't get to define what that, what that means. This has never

been defined in our statute.

So many years ago, we sought the counsel of the Boards of Medicine and Boards of Nursing who govern the physician assistants and the, I'll say nurse practitioners. And those groups said, yes. For the purposes of the Board of Medicine, PA is someone who means is otherwise, under the category allowed by law to practice medicine. And the Board of Nursing said yes, nurse practitioner is someone who's authorized by law to practice medicine and it makes logical sense.

So because of that, we don't have any regulation that really addresses, from 468's perspective, what a nurse practitioner does or doesn't do with fluoroscope. Theoretically, that's within nurse scope of practice to do that.

Now, I'm not an expert on your scope of practices. They may say we have issues with that, whatever. But from our perspective, that's the way our lawyers explained it to us.

MARK SEDDON: So in essence, it goes back to the Board of Nursing to determine what the scope of practice is for nurse practitioners.

JAMES FUTCH: Yeah.

MARK SEDDON: Right. That was just a -- we

talked about it around about before. I just wanted to -- it was requested to bring it back up again. So that was just the end to say we brought it back again.

JAMES FUTCH: What they said years ago was, both groups, in their own separate language, Board of Medicine language, Board of Nursing language, the scopes of those folks, they have an interesting phrase. I always get this a little bit wrong. It's basically, the scope of practice is those duties performed by the supervising physician or the protocol physician if they're in the case of the nurse practitioner. This is the way it was years ago.

Pursuant to basically the supervising physician's determination that they have the appropriate skill and ability and underneath their appropriate supervision. They like to use the word appropriate a couple different places to tie them back to that, especially in the case of the PA, to tie them back to that supervising physician.

In the case of the Board of Nursing, many years ago when we did this, they tied it back to a radiologist. But, of course, we asked the question in the context of the radiologist, and they were

answering that question in the context of the radiologist. So in their mind, that's a -- that's who they answered in terms of.

None of this is something that we get to -- I can't write a regulation under 468's authority that says, nurse practitioner you must do this or don't do this, or whatever it is with regard. I don't get to write one for something that is completely exempted from my statute. That's why.

MARK SEDDON: I thought it was interesting. I know we have a nurse practitioner.

KATHLEEN DROTAR: That's a subject that came up last week in a conversation I had with somebody, was why the nurse practitioner was doing fluoroscope. Now I can answer them.

MARK SEDDON: It's becoming a very common topic. I had this question raised numerous times this year.

JAMES FUTCH: And I haven't really followed closely what's happened with the Legislature every year and the scope of practice of the nurse practitioner and the different kinds that or extensions and changes that have happened with that. But when we were asked about it many years ago, there was a written protocol, and the Department,

the Board of Nursing required that be filed for the nurse practitioner. I don't know if that's still the case, Dawn, or not. And they would ask us about it and we said, well, does it say something on the, on the written protocol about x-ray? Does it say something about imaging procedures in some general or specific way sensored?

You know, in other words, we're not the experts in this, but this is what it appears to be what your group wants. Go talk to them and see, you know. Maybe -- certainly our inspectors go and look. If we see a PA performing procedures underneath a supervising physician that's a radiologist or, you know, I guess theoretically, a dermatologist who's doing skin cancer therapy or something like that, we're not going to cite them. And if the inspector sees a nurse practitioner and we're not going to -- I won't say we -- I won't say anymore. Okay.

MARK SEDDON: All right. Thank you for that.

Any other comments, questions? I know we're at the end of our meeting time. All right. I guess we'll unofficially adjourn our meeting.

(proceedings concluded at 2:53 p.m.)

CERTIFICATE OF REPORTER

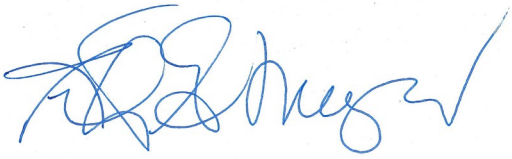
STATE OF FLORIDA:

COUNTY OF ORANGE:

I, RITA G. MEYER, RDR, CRR, CRC, do hereby certify that I was authorized to and did stenographically report the foregoing proceedings and that the foregoing transcript is a true and correct record of my stenographic notes.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties, attorneys or counsel connected with the action, nor am I financially interested in the outcome of the action.

DATED this 1st day of June, 2025.



RITA G. MEYER, RDR, CRR, CRC