

**RADIOLOGIC TECHNOLOGY CERTIFICATION COMMITTEE (RTCC)
MEETING MINUTES**

October 7, 2020

California Department of Public Health

Zoom Video Conference Meeting

Frieda Y. Taylor, MS, Chairperson

COMMITTEE MEMBERS PRESENT

Jessica Clements, MS, DABR, FAAPM
Anita Slechta, MS, BSRT, RT(R)(M),
ARRT, CRT
Eric Goodman, MD
Erica Kinne, MD
Mauricio Silva, MD

Daniel Lee, DPM, PhD, FACFAS
Lisa Schmidt, PhD, RT(R)(M), ARRT,
CRT
Steven Wang, MD, MBA
Lindsey Urband, MD

COMMITTEE MEMBERS ABSENT

Ehtisham Mahmud, MD, FACC, FSCAI

MEETING SUMMARY

I. WELCOME / OPENING REMARKS

Chairperson Taylor called the meeting to order at 9:00 a.m. She introduced the RTCC members as well as the California Department of Public Health-Radiologic Health Branch (CDPH-RHB) staff and shared various virtual meeting protocols.

II. APPROVAL OF OCTOBER 23, 2019 RTCC MEETING MINUTES

Chairperson Taylor indicated that per legal opinion, all members present could “vote with confidence” to approve the October 23, 2019 meeting minutes.

MOTION I

The committee voted to approve the October 23, 2019 RTCC meeting minutes as drafted.

Motion: Committee Member Kinne
Second: Committee Member Goodman

Vote:

9 Yes: Dr. Mauricio Silva, Dr. Steven Wang, Dr. Lindsey Urband, Dr. Daniel Lee, Dr. Lisa Schmidt, Dr. Eric Goodman, Dr. Erica Kinne, Ms. Jessica Clements, Professor Anita Slechta

0 No

0 Abstain

MOTION PASSED UNANIMOUSLY

Chairperson Taylor noted that the approved minutes would be visible on the CDPH-RHB website no later than 30 days from today.

III. CERTIFICATES OF APPRECIATION: OUTGOING RTCC MEMBERS

Chairperson Taylor presented certificates of appreciation to Dr. Erica Kinne, Dr. Ehtisham Mahmud, and Dr. Hector RiveraMelo thanking them for their service to the RTCC.

Dr.'s Kinne and Mahmud, representing physicians and surgeons, and Dr. RiveraMelo, representing Chiropractors, each served one term.

IV. LEGISLATIVE AND REGULATORY UPDATE

Phillip L. Scott, MA, CRT
Senior Health Physicist Regulations Unit
Strategic Planning and Quality Assurance Section

Mr. Scott reviewed the following Legislative/ Regulatory items.

- Assembly Bill (AB) 407: Fluoroscopy and radiography permit or certification and continuing education: exceptions
 - Would allow a licensed medical doctor, doctor of osteopathy or doctor of podiatric medicine (i.e., doctor) to provide fluoroscopy & radiography services and supervise CRTs prior to receiving a fluoroscopy supervisor and operator permit if the doctor submits to CDPH evidence of completing radiation safety training provided by a facility accredited by the Centers for Medicare and Medicaid Services' (CMS) Conditions for Coverage (CfC) relating to radiation safety.
 - A CDPH Examination would not be required to obtain the permit.
 - Would require CDPH to provide for doctors that working in a setting that is in compliance with the CMS/CfC relating to radiation safety satisfies continuing education requirements specified in regulation.

Since February 2019 the bill has been amended four times. The Senate Appropriations Committee placed the bill on a suspense file and has held the bill under submission. Mr. Scott noted that bill had died in Committee per constitutional rules.

He strongly recommended that everyone who wants to participate in legislative actions visit the website leginfo.legislature.ca.gov to track California laws and proposed legislation.

- Assembly Bill (AB) 2544: Fluoroscopy: temporary permit
 - Would allow CDPH to issue a nonrenewable, temporary 9-month fluoroscopy permit to a licensed doctor (MD, DO or DPM) who has submitted an application and is awaiting examination for a fluoroscopy permit.
 - Would require the application to indicate the location or facility where the doctor will be providing fluoroscopy under the temporary permit.

The Bill was introduced in February 2020 and was referred to the Assembly Committee on Health and Business & Professions. Mr. Scott noted that by the time the Bill was introduced, we entered into a COVID-19 pandemic and that bill had also died.

- Senate Bill (SB) 480: Radiologists assistants
 - Would establish, under the Medical Board of California, the Radiologist Assistant Practice Act.

The Bill was introduced in February 2019 and was entirely amended during the process to no longer address the introduced topic (radiologist assistants). Mr. Scott noted that the Bill now addressed some kind of law enforcement uniform issue which had now been enacted. Mr. Scott again recommended visiting the leginfo.legislature.ca.gov website to track these bills. He then provided a regulatory update.

- Completed:
 - DPH-10-005 – Use of X-ray in Mammography (Facility requirements) took effect July 1, 2020.
 - DPH-10-007 – Physicist authorization took effect October 1, 2020.
 - DPH-17-009 – Radiologic Technology Act Regulations: RTCC Recommendations which became effective October 1, 2020 and addresses the following:

- Movement of a patient or equipment during fluoroscopic X-ray procedures; Recording of cumulative irradiation time or exposure during fluoroscopic X-ray procedures; Scope of practice of a certified radiologic technologist (CRT); and Experience requirement of individuals who provide training oversight to students during training in radiologic technology.
- Proposed:
 - Elimination of the Radiologic Technologist (RT) Fluoroscopy Permit.
 - The RTCC recommendation was that upon adoption, a CRT who graduated from either a JRCERT accredited radiography program or an ARRT recognized educational program in radiography and has passed the ARRT's radiography examination would not need to obtain a fluoroscopy permit.
 - For those CRTs that do not have a fluoroscopy permit there would be a transition process to obtain it: Submit documentation of completing ASRT's fluoroscopy continuing education series and pass ARRT's fluoroscopy exam or submit documentation of graduating on or after January 1, 2011 from either JRCERT accredited radiography program or an ARRT recognized educational program in radiography.
 - The proposal impacted DPH-17-009.
 - Finalizing regulatory text & rulemaking documentation.

DISCUSSION

Committee Member Slechta expressed that she thought the title “elimination of the fluoroscopy permit” was an error because we still have to have the permit. She stated her understanding that after 2011, a person does not have to take the test if they've taken the ARRT. Further, she stated the understanding that a mechanism had been found for individuals who graduated prior to 2011; by taking the ASRT continuing education and submitting for the permit with the fee.

Mr. Scott confirmed and replied that we are not going to issue the fluoroscopy permit as a permit. It's going to be changing its terminology to a fluoroscopy authorization. The concept of issuing a separate document will no longer occur.

Committee Member Slechta asked if individuals would have to test any more as of October 1, 2020. Mr. Scott replied that if they've met that criteria, then they would not have to test. If they don't meet that criteria, they would have to test.

Committee Member Schmidt stated her understanding that CRTs who graduated years ago and are currently CRTs without fluoro would need to submit documentation of completing the ASRT fluoroscopy series and also take the ARRT fluoroscopy exam. Mr. Scott confirmed that was correct.

RTCC Coordinator Arriola read a public comment from the Zoom chat box from payneC7: What happens to those who already scheduled for the test?

Chairperson Taylor emphasized that this question might be confusing something that has nothing to do with Phillip's presentation, which was a regulatory update on elimination of the fluoroscopy permit. She suggested that any questions regarding the October 1, 2020 implementation of the pathway for expeditious receipt of a radiologic technologist fluoroscopy permit be submitted to rhblisc@cdph.ca.gov. Those questions were not relevant to Phillip's presentation and the regulatory update.

RTCC Coordinator Arriola read a public comment from the Zoom chat box from Brett Bergman: Are the RT fluoroscopy school regulations being affected by this proposed rulemaking? Mr. Scott replied the answer is yes and no. He explained that the fluoro school is in one particular section of regulation. Mr. Scott noted that we do issue fluoroscopy permits to physician assistants and explained there are two pathways for physician assistants to obtain their training and complete the requirements for taking the examination. One of those is to complete the fluoroscopy school curricula in the regulations which is essentially specified over in the physician assistant sections. He noted that the RT fluoro school would be re-focused to just be a fluoro school that either an RT or a PA can go through. Phillip described a transition process in which CRTs that do not have a current fluoro permit would have the option through the fluoro school and the opportunity to do the ASRT continuing education in the fluoroscopy area. He explained that if we eliminated the fluoro school entirely, that would limit the pathways for physician assistants.

RTCC Coordinator Arriola read a public comment from the Zoom chat box from Tony Brown: Who authorizes CDPH content for training? And a follow-up, the current level of training is not preparing RTs for the kind of C-arm work demanded by surgeons in the O.R. Mr. Scott replied the curricula currently there was recommended and established through the RTCC and public meetings. Currently, that training requires 40 hours didactic and 40 hours clinical. Mr. Scott also offered that if you believe the training is not currently adequate, that brings up a bigger question of the RTCC's recommendation to eliminate the fluoro permit for certain people, understanding that the curricula that is taught is adequate, and in the examination that is given is rigorous enough to test for the use of fluoroscopy. Mr. Scott noted that topic would be a future agenda item, if so chosen, but that is not being addressed in the proposal.

V. Physician Engagement in Radiation Safety: A Change in Culture and Opportunities to Improve Procedural Safety

Islam Abudayyeh, MD, MPH
Associate Professor of Medicine
Loma Linda University

Dr. Abudayyeh began by noting the topics he intended to cover in his talk: justification, optimization and dose limits, current trends in cath lab utilization, radiation protection, determination of procedural dose and management, a change in culture and safety education and finally, a call to action with possible avenues of where this Committee can help.

Dr. Abudayyeh described the types of radiation risks, stochastic and deterministic, which apply to patients and the medical team. He noted the need for the awareness of everybody in the room. He reviewed basic principles of radiation protection referencing dose limits for personnel, the public and the patients. He provided examples of the effects of X-ray exposure for the patient and the operator and discussed principles for achieving radiation protection noting factors such as time, distance and shielding. He commented that radiation awareness is a culture. It's the responsibility of the lab and leadership of the institution.

Dr. Abudayyeh described practical techniques for consideration such as patient position, tube angulation, magnification, collimation, and system settings. He emphasized the need for a change in culture and discussed how to achieve better radiation protection for patients, operators and staff. He discussed trends in radiation utilization and spoke of the need for improved awareness, both in the public and the procedural labs, for radiation safety; better education in academic institutions; Monitoring and regulation by the State and hospital administration, including QI panels; improved set-up by vendors and support by technicians: customized programming, technician and physician awareness of the technology; and more options for protections, shielding, positioning the shields, zero gravity systems, and tracking systems.

Dr. Abudayyeh shared multiple methods of raising awareness such as providing a report to operators with high radiation doses using things like dosimeters; providing a specific stop limit unless there's a medical emergency; requiring a second operator review; and staff notifying operators of threshold exceeded during procedures.

Dr. Abudayyeh described additional opportunities to increase awareness such as reviewing radiation reduction processes and techniques as part of conferences; offering recurrent education opportunities for operators in the lab and on the use of equipment; offering institutional support to acquire and maintain shielding such as glasses; and acquiring real-time feedback devices to show the operators the active radiation exposure.

He shared examples of educational opportunities: routine classes for technicians and operators on the use of these machines; recurring radiation safety classes with required attendance, similar to annual staff compliance training; engagement with institutional Radiation Safety Officer; encouraged attendance to radiation safety meetings for trainees and operators who consistently have high radiation exposure levels. He shared that education is a required part of training for fellows and new technicians, noting that it's part of the didactic before fellows enter the cath lab. He described routine reviews of cath lab routines by leadership where immediate feedback is given. Lastly, he described utilization of alternative technologies to limit doses such as combining procedures, CT scans and angiograms, for instance.

Dr. Abudayyeh noted the need for outreach and expressed a desire to see better engagement with professional societies where we focus on radiation as a potential complication. He stated the need for testing entities, such as ABIM, to be a more integral part of the certification process. Finally, he noted that non-traditional operators, such as CT surgeons need to be trained.

Dr. Abudayyeh shared numerous possible approaches for improving operator engagement, for instance: making CMEs more accessible and offering alternative ways to fulfill requirement; ensuring these CMEs are truly in the field of radiation safety and operations; updating the CME content to reflect modern technology; making the process of keeping the fluoroscopy license more relatable and practical for day-to-day practice; collaborating with national and state societies on including radiation safety as a part of the education curriculum for fellows prior to graduation with tools such as webinars and online symposia; considering hospital compliance tools; asking institutions to submit reports every quarter or 6 months on radiation utilization by number (and possibly type) of procedures; using a scorecard would be something to consider; comparing internal radiation score card to peers, and external score card to other institutions; dose analysis and determining what to do about sentinel events; identifying a physician champion to do intermittent review of radiation utilization; developing the mindset that radiation exposure is a constant challenge and a potential complication to be tracked; setting a minimum expectation for the operators and staff; attempting to curb the significant variability in radiation use among physicians and operators as there is not a uniform process for radiation reduction per facility; addressing the gaps in knowledge and experience among proceduralists.

Dr. Abudayyeh referenced parallel approaches noting that the NCDR CATH PCI registry now includes a reporting field looking at radiation use per procedure and is a nation-wide reporting tool. An additional approach was similar to registries and reporting metrics in other states that identify radiation exposure and safety as a quality metric and part of the cath lab operations. He further called for the need to reframe operational priorities to include radiation safety on an institutional level.

Dr. Abudayyeh asked what the committee could do to help. He offered suggestions such as creating a forum to receive suggestions and feedback from operators on what they need to be better engaged. He asked questions such as: Should we look at changes to existing regulations? Can we encourage better compliance and motivate physicians to want to do better in day-to-day operations? Should there be a regulatory action related to high exposure events? Possibly a report required to be filed for poor performing labs? He suggested that the committee consider encouraging hospitals that do not have an in-house physicist or radiation safety officer and that use an outside entity to utilize such entities to review and give recurrent feedback to PSRC and QI panels. He finished by showing the cath lab operational limits for his program and welcomed questions from the committee.

DISCUSSION

Committee Member Lee observed that a lot of these products come in certain dimensions and sizes and, over time, have been quite difficult to maneuver around. As surgeries and techniques have become more complex, the ratio between the detector and source can vary over time. Do you see the role of a government agency, such as us, for our public safety to influence our commercial partners to adapt, or change, or have regulations especially in California, to allow certain criteria for the design of these products, such as C-arms or for the protections of our CRTs, while we're in the operating room? Dr. Abudayyeh answered I not only would wish that this panel would influence it, I sincerely hope that they would consider having an influence on the manufacturing of these devices and creating regulation.

Committee Member Slechta noted that one of the presentation slides didn't include orthopedic surgeries and asked who, at your institution, is actually collecting that data? Dr. Abudayyeh responded it wasn't his intention to exclude them. It's more of a matter of knowledge. I don't really work with orthopedics. He answered that it was one of their technologists who collects the data and keeps track of all radiation exposure. Committee Member Slechta noted that to create regulation, I think we would have to have a subcommittee. This is such an extensive system that you have, I think it would have to be broken down in a subcommittee and brought back to RTCC.

Senior Health Physicist Scott commented that manufacturing of x-ray equipment is under federal oversight only. As a committee, your focus is on the certification and enforcement of certification in radiologic technology and what qualifications those individuals need in order to be considered competent or can use that safely. A lot of the other stuff (reference levels, reporting requirements) fall into a different statute outside of your jurisdiction. You can still make the recommendations, just be aware that we're stepping over two, maybe even other statutes of laws that come into play when you do this.

MOTION II

Form a subcommittee to try to figure out how we can make recommendations based upon this presentation.

Motion: Committee Member Slechta

Second: Committee Member Clements

Committee Member Goodman asked if the speaker was requesting for the committee to make it mandatory to report radiation exposure or radiation time. Dr. Abudayyeh confirmed that is what he was suggesting.

FRIENDLY AMENDMENT

Committee Member Clements suggested refining the scope of the subcommittee to the aspect of how to make licensing more practical.

Vote:

9 Yes: Dr. Mauricio Silva, Dr. Steven Wang, Dr. Lindsey Urband, Dr. Daniel Lee, Dr. Lisa Schmidt, Dr. Eric Goodman, Dr. Erica Kinne, Ms. Jessica Clements, Professor Anita Slechta

0 No

0 Abstain

MOTION PASSED UNANIMOUSLY

Chairperson Taylor asked if the committee wanted to make a motion to determine the Chair of the subcommittee. Receiving no response she recommended having a part two in the spring in order to get forward movement with the Committee.

VI. NON DIAGNOSTIC USE OF C-ARM IMAGES AND THE IMPACT OF NON LICENSED PEOPLE OPERATING FLUOROSCOPY BASED EQUIPMENT

Roy Anthony (Tony) Brown, RT, (R), (F), CRT, ARRT
Christina Derrington, MS, RT(R),(CT), ARRT, CRT

Ms. Derrington shared that diagnostic and therapeutic use of X-ray have their own regulations and training pertaining to each. She noted that most Radiography schools focus on the use of X-ray machines (stationary and portable). Students are taught the positioning needed for each exam and the ALARA principals to consider when it comes to things like time and repeat exposures. When it comes to the C-arm and non-diagnostic imaging, there's not as many regulations and training. She suggested that non-diagnostic fluoroscopic imaging equipment needs to have its own category of radiation, regulations, and formal training.

Ms. Derrington shared the lack of non-diagnostic education and regulatory ramifications are having a catastrophic effect on the way that the AMA and other organizations classify and pay for services that are x-ray related. Further, ALARA is not practiced due to the lack of universal education or training for C-Arm procedures. She shared that many exams using fluoroscopy are used not to diagnose, but to visualize an object. She provided examples of non-diagnostic fluoroscopy: vascular implants, minimally invasive spine procedures like kyphoplasty, pain management, and operating room procedures for orthopedics neurology, and urology.

Ms. Derrington suggested the use of non-diagnostic fluoroscopy means increase of radiation; exams are using non-diagnostic fluoroscopy with technologists and doctors that have limited formal training on the machine. She highlighted the need for non-diagnostic fluoroscopy education for techs and radiologists.

Ms. Derrington offered suggestions for improving the non-diagnostic use of fluoroscopy: Pre-operative planing by taking existing CTs or MRI images - A skin starting point can be calculated by utilizing radiolucent indicators or shadows originating from the C-arm; Intra operative execution - Using alignment and angle indicators, introducers and devices can be implanted with less fluoroscopy time or number of images; Procedural performance - Keeping alignment and angle tools in place will confirm the doctor's hand and devices are continually aligned.

Ms. Derrington described an informal, small scale X-ray/ fluoroscopy machine study on how comfortable newly graduated students (within the last two years) felt about the four machines they work with in their x-ray career. The question revolved around the four machines they work with as an x-ray tech: stationary x-ray (the room x-ray), portable x-ray machine (the portable), stationary fluoroscopy (R/F or IR room), and portable fluoroscopy (C Arm). They were asked to number the machines 1, 2, 3, and 4 as to how comfortable they felt using it in the field when they graduated, with 1 being the most comfortable and 4 being the least comfortable. 29% gave the C-Arm a 3 and 65% gave the C-Arm a 4, meaning they were the least comfortable with the C-arm itself. She referenced Informal conversations with surgeons in the operating room about their satisfaction with the knowledge of radiologic technologists with C-Arm equipment and their knowledge of procedures is abysmal at best.

She provided examples of diagnostic rulings that affected non-diagnostic use in the past: 1992 - Don Honey issued a guidance letter to address the use of mini fluoroscopy and instructed the use of mini C-Arms did not need lead aprons or the use of permitted personnel to operate equipment; In the early 2000's - RHB issued a 4-example memo that attempted to clarify what scenarios non licensed and permitted personnel could perform. She noted that now, DPH-17-009 attempts to confuse things further.

Ms. Derrington continued by noting future concerns and examples of non-diagnostic rulings that will affect non-diagnostic use: C-arms now are being equipped with CBCT functionality. Non-diagnostic use of this equipment in support of robotics and 3-D computer navigation now needs attention; soon portable continuous 3D imaging will be commercialized. After recently getting FDA approval we will have to address regulatory and training more in depth than what device equipment manufactures offer.

Ms. Derrington summarized: The consideration of creating non-diagnostic use of fluoroscopy into its own imaging category can create an education and regulatory space needed for the future of expanding non-diagnostic X-ray based modalities. We are asking for the consideration of our tools, methods and principals identified over 25 years of experience in the surgical imaging market to jump start this conversation. If we fail to recognize non-diagnostic imaging as a category of its own radiation use, the future of its reimbursement applicability, regulatory laws, guidance, and patient safety will continue to be neglected and decline over time more so than it already has.

DISCUSSION

Committee Member Schmidt asked if the informal study was about the time when they were students on was it about their new career? When you asked the question, you had 22 individuals answer you. Was there a larger sample size than that and only 22 got back to you? Ms. Derrington answered it was only 22 and the question was asked as if you were right outside of graduating from x-ray tech school.

Committee Member Urband asked for clarification: Your talk seemed to be about your concern for education with fluoroscopy training for radiation technology students, correct, not for surgeons or for other medical professionals? Mr. Brown responded that one goes with the other. What we're saying is in the operating room and the procedure rooms, using portable fluoroscopy C-arms, the surgeon or surgeons have not really come up with a standardized set of positions or considerations for positioning.

Committee Member Slechta commented that if you are suggesting quality education for both, we have the education in place for technologists. But the State of California does not require licentiates to have education. They only require them to take a test currently. You sounded like you were focusing on technologists, but in fact the presentation focused on both. What are you focusing on? Mr. Brown answered what we really need is for surgeons that require the use of C-arms to go through a process to where there is a standard procedural way of doing the procedures.

Committee Member Silva commented that there are hundreds of procedures done by pediatric orthopedic surgeons that adult surgeons do not do. That is the reason why we actually learn the basics and the safety of fluoroscopy and try to apply to our specialty. From my standpoint of view, I think it would be very, very difficult to achieve what you are proposing. Mr. Brown agreed there's no way to just say a standard view because the typical anatomy is always going to dictate what your clinical decisions are. What I'm trying to get to is the level of knowledge that needs to be transferred to the technologist. We have to educate the technologist to understand the procedures. If the education of the technologist were up to speed and they understood how to get the right image that the surgeon is looking for things will go a lot smoother.

Committee Member Lee commented that in California, CRT schools have been fantastic, with a great clinical experience and training. There are some items in your presentation I find very confusing, as far as what audience you're actually targeting. Your subset in your presentation appears to me to be a very small subset that does not share with the larger community in the podiatric and the foot and ankle community. Mr. Brown replied as a non-physician a non-M.D., I'm always sensitive to try to stay out of clinical talks and keep it on a radiologic basis. In the procedure room, there's a deeper understanding that I have with my doctors, that they rely on my knowledge of what they're doing to have a successful outcome with their surgeries.

Zoom Chatbox Moderator Rojas read a public comment from Anonymous: Applications from the manufacturer should be key when bringing in new equipment or introducing new procedures to a facility. Mr. Brown replied that's the only training that is really ever given is through applications training. You're given some CEUs to go through a one-time training. If there was training that involved how cone beam CT was used, the physics behind it and the equipment that's currently out there and how to operate it correctly, it would go a long way in reducing a lot of this intraoperative dose, whether it come from a C-arm, or a cone beam CT, or a regular CT that's in the O.R.

Zoom Chatbox Moderator Rojas read a public comment from Joseph Hewes at Loma Linda University: In light of your comments, I have reviewed the ARRT clinical experience requirements and the ASRT curriculum. Both seem to cover these procedures generally but not specifically. I believe they would be the ideal groups to lobby to increase specificity on program curriculum and experience requirements. My suspicion is these procedures represent a small enough proportion of exams that it hasn't merited additional specifics in this area by those groups. However, you did mention the use of CBCT, O-arms, and other full field CT technologies. I do share concerns that the individuals who operate those equipment may need additional regulatory oversight. Current curriculum and regulatory frameworks do not provide a clear way to validate that the operators of the equipment possess the knowledge and skills to protect patients from adverse

outcomes, or poor image quality, or excessive radiation exposure. That is an area this group could take action to improve public safety.

Zoom Chatbox Moderator Rojas read a public comment from HMartine: Why are licentiates not required to go through formal documented training on use of x-ray equipment?

Zoom Chatbox Moderator Rojas read a public comment from payneC7: Just a comment. Most procedures and how the procedure is performed is surgeon dependent. Surgeons and techs do not speak the same language.

VII. LUNCH

12:17 p.m. – 12:47 p.m.

VIII. NEW ONLINE LICENSING (NOLA) UPDATE

Gonzalo Perez Chief, Radiologic Health Branch

Mr. Perez noted that the idea for NOLA was to modernize the program and incorporate an online communication with our stakeholders, starting out with seven licenses for physicians and physician assistants.

Mr. Perez discussed the programming aspect in detail, noting that the enterprise licensing platform was called Pega. He explained that the Radiologic Health Branch is heavily reliant on the skills of our Information Technology (IT) Department and shared that we have been using the Health Application Licensing (HAL) platform for at least 50 years. He stated there's lots of data in HAL which has to get migrated onto the new platform server and emphasized that we are totally dependent on the IT group to do that data migration.

He explained that once the IT department bought into the Pega platform, they created a center of excellence (COE), to be the gatekeeper for how Pega modules are designed, developed. He noted that over the history of NOLA, that COE group has evolved from original requirements to several other requirements, and its changed requirements. As they make requirement changes, we have to accommodate that through our NOLA process, the way we're programming and creating our program.

He described the business process modeling that mapped out our processes and noted that it took many months to map out every license process. Once complete, the Pega programmers had a roadmap to begin to developing a user story (a very precise instruction so that one can complete a step in your development). He shared that in order to complete your map and do your programming, you literally have to write user stories for every step in your mapped out process. In the last two years, we have developed and written

several hundred user stories. Those user stories are reviewed by staff and contractors. We compile as many user stories as we can into what they call a sprint. The programmers take those user stories and spend a couple of weeks and implement those stories into a programmable format. Once complete, they come back and demonstrate those user stories to staff who are making sure that the intent of the user story was ideally programmed in the Pega format.

Mr. Perez went on to describe the budget associated with the project noting that the RHB is on a limited budget that operates on a fiscal year basis. We can see as the months go by our authorized spending versus our actual spending and we have to monitor that so that we know how much funds we have available to pay for the sprints. This makes this a long-term project because we have to do this over ongoing fiscal years. He noted that both the contractors and our internal IT group are expensive, so we're forced to just take small bites of the apple and we are just doing a few sprints per year. He shared that the future of NOLA is laid out in a way where we're going to continue completing small bites. The availability of funds dictate the process and the progress.

Mr. Perez shared that RHB is dependent on our department's IT department for data migration and programming. He noted that NOLA work has stopped since COVID, but we were on pause prior to that because our IT department was having difficulty and was taking a long time in migrating the data to the new server. He shared that COVID has redirected not just RHB staff and some staff that are important to the development of NOLA, but mostly the IT group. They have all been redirected to assist the Department's Director and Agency in developing software and monitoring the data on the COVID cases. So, we don't have that resource available to us right now. We want to hopefully soon be able to get back into sprints. Testing is imperative. We use our internal staff to do the testing. The testing discovers bugs. We have to resolve the bugs. NOLA development does stop during testing. We're always cognizant of ensuring that our routine work doesn't get slowed down.

Mr. Perez expressed the RHB has continued to strive to meet our goal. However, we remain cautious with our budget and staff times. And we're also still hopeful that the Department's Information Technology group can complete and meet the commitments they've made to us, whether it be the data migration, or the Pega platform stability. That's where we are with NOLA and we're going to continue to strive to complete the project.

DISCUSSION

Committee Member Urband commented her understanding was that the physician's certification and recertification online application process would be available as of July 1. I'm wondering if that has a new updated deadline when that's going to be available. Mr. Perez answered he was not sure where that date came from. We have never announced any kind of starting date for NOLA.

Committee Member Urband asked if Mr. Perez had an estimation for when that would be available. Mr. Perez replied it's really difficult to estimate. We don't know how much longer this pandemic is going to affect the availability of our IT department. And that's really put a pause on the development. Until we can get back to that point, I couldn't even begin to estimate when we're going to be finished with that.

Committee Member Silva referenced the seven different licenses that are going through this roadmap. Are they all in the same stage or are have some of them actually gone through online application and there are some that are still going through the process? Mr. Perez replied that we did them all as a whole. And so they're all essentially at the same phase.

Committee Member Silva asked do you foresee that this will take a year, two years, ten years, just to have an idea for our purposes? How long can this process take, because it's been a couple of years. Mr. Perez replied I really hate putting a time frame on it. If I do, then if we don't meet it, then it won't look right. I honestly don't know. I guess the first question is how long is COVID going to keep us from starting back up?

Committee Member Slechta asked so you're saying IT is stopped because of COVID? Mr. Perez replied IT has higher priorities because of COVID.

Zoom Chatbox Moderator Rojas read a public comment from Linda Kroger: What is the goal for completion of the online application process for certification? Mr. Perez replied the ultimate goal of NOLA is for a physician or physician assistant to be able to apply for a new license online or renew their existing license online and pay online.

Zoom Chatbox Moderator Rojas read a public comment from Diane Przepiorski: If opening up an online NOLA licensing application is not on schedule for physicians and surgeons, what other steps are the RHB taking to speed up speed up the very paper-based/manual application process that prevent physicians from getting into practice in California? Mr. Perez responded that we recently did a study and it's about a four-and-a-half month on average process. From an anecdotal standpoint, usually around 30 or 40 percent of the physicians cannot provide the information in their initial application correctly. We meet all of our regulatory days requirements. We do that within 30 days, and we meet that consistently. There are occasionally outliers. And we meet it where we communicate with the physician and we have examples of weeks, and weeks, and weeks, and weeks before the response comes back. So those kinds of delays are built into that four-and-a-half month estimate. In terms of anything in the future, we are looking at a couple of ideas, but nothing has been fleshed out. I think right now it's just up to staff and the community to be as patient as possible, and to work with us, and communicate with us as much as they can. And hopefully that will help a little bit around the edges until we can get NOLA up to speed.

IX. PUBLIC COMMENT

Zoom Chatbox Moderator Rojas noted there were comments remaining from our first presentation on physician engagement and radiation safety.

Zoom Chatbox Moderator Rojas read a public comment from Tony Brown at 10:07 am: Try an x-ray filter or filter system. X-ray filters increase the technique but decrease dose. Unfortunately, it has an adverse effect on reporting due to higher RAD output readings. Independent dose readings need to be considered as equipment DAP or KAMRA readings are a product of formulas based on RAD reported by equipment

Zoom Chatbox Moderator Rojas read a public comment from Tony Brown at 10:16 am: Flipping the II to the bottom can also reduce RAD as latent imaging has less distance to travel. Inverse square law.

Zoom Chatbox Moderator Rojas read a public comment from anonymous at 10:21am: I agree in intervention imaging there needs to be substantial dose policies. Patients need to be followed up and told they have received a substantial dose.

Zoom Chatbox Moderator Rojas read a public comment from AVI at 10:24am: Great talk, Dr. Abudayyeh. What are your thoughts on using disposable shielding like Radpads around the patient anatomy of interest, during long cardiac procedures to reduce operator dose? There has been growing interest in using it intravena[SIC] radiology and cardiology. It goes without saying for any AEC-driven fluoro system, if the dispensable shield comes into the beam FOV, it will have the opposite effect and drive dose higher. Wanted to hear if you have any experience with this. Dr. Abudayyeh replied it's a very good question. Radpads and appropriate shielding placed at just the right location on the patient can actually reduce the radiation exposure by upwards of 70 percent and can actually, in addition to the shield, reduce the radiation exposure to the operator by upwards of 90 percent. So it is a substantial tool. It doesn't cost us anything or very minimal.

Zoom Chatbox Moderator Rojas read a public comment from anonymous at 10:27am: The culture needs to change that AEC is not ALARA. Conversations need to happen between physician and RT on the technical factors and how they can change, and should change all through the procedure for imaging purposes and radiation exposure to patients.

Zoom Chatbox Moderator Rojas read a public comment from Tony Brown at 10:33am: Are you reporting through the Medicare Quality Payment Program? If not, your Medicare reimbursement can be positively increased the reporting the data you're tracking if improvement can be identified after benchmarking. Dr. Abudayyeh replied I did see that comment and we're looking into that. I was not

as familiar with it, so colleagues are looking at it. It's an excellent comment and I wanted to thank the person who sent it in.

Zoom Chatbox Moderator Rojas read a public comment from anonymous at 10:35am: How many facilities in California that have established radiation dose policies have risk management stopping letters going out to patients that received a substantial dose?

Zoom Chatbox Moderator Rojas read a public comment from Tony Brown at 10:51am: Techs have little say in the operation of C-arms as ortho surgeons struggle to understand how to use the C-arm during their learning curves under fluoroscopy, so we suffer along with the O.R. staff under the high RAD levels.

Zoom Chatbox Moderator Rojas read a public comment from anonymous at 10:45am: I agree that we need to have State regulations on substantial radiation reporting and policies.

X. CLOSING COMMENTS

Chairperson Taylor noted that the next RTCC meeting would be held in Southern California or via virtual platform on April 14, 2021. She thanked all in attendance for their participation and stated that the California Department of Public Health would continue to partner with the regulated community to better serve the citizens of California by continuing to maintain focus on health and safety.

Chairperson Taylor adjourned the meeting at 1:23 p.m.