Speaker 1:

You will now be placed into conference.

Speaker 2:

Good morning. And thank you for standing by. I'd like to inform all participants that your lines are open. Today's call is also being recorded. If anyone has any objections, you may disconnect at this time. I would now like to turn the call over to, Miss Kandice Ray. Thank you. You may begin.

Kandice Ray:

Good morning. This is Miss Kandice Ray. I'm here for the Forensic Healthcare Sexual Assault Medical-Forensic Examiner didactic training for 2021 to 2022. This is your annual refresher training. For today's presentation, we will have three different presenters. We'll have myself, Commander Rachel Hernandez, and then also, Mary King. And they will be joining us throughout to provide various portions of the lecture. With Commander Hernandez, Commander Hernandez, has to as the regional trainer for the Sexual Assault Medical Forensic Examiner (SAMFE) Program for the Naval Medical Forces Pacific since September 2019. Commander Hernandez, was born in Louisville, Kentucky. She graduated from Sanford University where she received a bachelor's science in nursing and was commissioned in the United States Navy in July 2002. After completing Officer indoctrination school in August 2002, Commander Hernandez, served as a staff nurse at the National Naval Medical Center, Bethesda, Maryland. Commander Hernandez, deployed abroad from March of to June 2003 in supportive of Operation Iraqi Freedom. In February, 2005, Lieutenant Commander Hernandez deployed to the US NS Mercy in support of Operation United Unified Assistance to providing humanitarian aid to the victims of the tsunami in Southeast Asia.

Commander Hernandez, transferred to US Naval Hospital Okinawa, Japan in September 2005. And while there, she deployed to [inaudible 00:02:13] as an individual augmentee to the first medical battalion in support of [inaudible 00:02:18]. In May of 2008, she started full time duty under instruction of the unit for Service University of the Health Sciences. She completed the family nurse practitioner program, earning a Master's of Science in Nursing Degree in 2010. In June of 2010, Commander Hernandez, transferred to the Naval Hospital Oak Harbor serving as a family nurse practitioner. While there, she created the sexual assault forensic exam program for this facility. In July of 2013, she reported to U.S Naval Hospital Rota.

Commander Hernandez, gained leadership experience in [inaudible 00:02:55] care while serving as the department head for the Medical Home Port Clinic. In August of 2016, she reported to the Naval Hospital Pensacola, where she served as family nurse practitioner and SAMFE program manager. She also earned her Sexual Assault Nurse Examiner-Adult/Adolescent certification. Commander Hernandez, personal awards and decorations inside the Navy and Marine Corps, accommodation medal, three awards and Navy achievement medal, two awards. She is a member of the American Academy of Nurse Practitioners and the International Association of Forensic Nurses.

And we also have Lieutenant Commander King, and since 2019, Lieutenant Commander King has served as a Sexual Assault Medical Forensic Examiner program manager and trainer for Naval Medical Forces Atlantic. Her experience as a perinatal clinical nurse specialist and CNA prepared her for this existing role. As a regional SAMFE trainer, she collaboratively developed 20 training newsletters, overhauled the SAMFE refresher training course material, revise SAMFE assistant training material, and led a dozen training webinars. Lieutenant Commander King remains clinically relevant through ongoing SAMFE simulations and monthly rotations in labor and delivery. And for myself, Miss Kandice Ray, I

serve as a nurse specialist for the Defense Health Agency. I am the one who attends multidisciplinary meetings and identifies potential MTF case management challenges through continuity of care assessments. Reviewing the multiple databases and point of contacts available for our specified population. I provide clinical experience, administrative, and organizational skills and managing the continuative care from the corporate level.

And I'm the subject matter expert on all continuity of care issues identified at the MTF level. I interface and facilitate collaboration with the identified MTF provider, forensic healthcare examiner to include the Sexual Assault Medical Forensic Examiner within established timeframe as two services needed to optimize health status and benefits of case management service. I act as a liaison to the Medical Center of Excellent staff to ensure training needs identified from the ground up, are addressed in the courses provided to the medical treatment personnel. And I'm also dual board certified as a Sexual Assault Nurse Examiner-Adult Adolescent, and also a sexual assault nurse examiner for pediatric population from the International Association of Forensic Nursing. And so I have the opportunity to partner with local hospitals and now with our military treatment facilities to maintain competency in sexual assault medical forensic examinations.

And so I welcome everyone here today that is joining us. That is our staff here. We're very fortunate to have the presenters that we have for today's training. I'm going to review some of the administrative portions that we have to do at the beginning of the trainings, and we're going to be reviewing the required instructor disclosures. I do want to let you know that our instructors today have nothing to report. This is a mandatory requirement that we let you know that. On your student evaluation at the very end of this training, you will need to check that you were provided that information and that we reviewed those disclosures with you. If you have any other questions, you can please make sure you contact the Education Department.

The trade names will be avoided as much as possible during this training. The topics covered do contain graphic material, so we want you to be sensitive to that, that depending on where you're taking this training at that you need to be mindful of your surroundings. And then also for yourself as well too, that you know that there are times with the type of material that we're presenting today, that you need to be mindful that it may pop up on your side at times, and the topics we discuss are sensitive as well too.

Please know that the topics that we cover and the information that we provide you today is only current at the time of this presentation. These PowerPoint presentations will be available to you. They are for internal use only, and they will be available for download as well as the handouts as well too. With that being said, this is just for the forensic healthcare examiner. The reference to any commercial products or private organizations within this publication does not create or imply any endorse by the Defense Health Agency, Department of Defense or the U.S Government. With the disclosures, the presenters have no relevant financial or non-financial relationships to disclose relating to the content of this activity. The views express in this presentation are those of the author and do not necessarily reflect the official policy of position of the Department of Defense, DOD, not the U.S Government.

This continuing education activity is managed and accredited and all accrediting organizations do not support or endorse any product or service mentioned in this activity. Activity planners and reviewers have no relevant financial or non financial interest to disclose. And commercial support was not received for this activity. With the course purpose today, the purpose of this training today is to provide the required training to healthcare providers who perform the sexual assault medical forensic exam, the SAFE, in the military treatment facility. And this is an accordance with DoDI 6495.02 and DoDI 6310.09.

In is lecture series that we have, this is a basic outline of the primary topics that we'll be covering today. We'll be covering a team approach, informed consent and patient centered care. We'll cover the sexual assault forensic examination, medical forensic documentation, injury, and photography, alcohol drug facilitated sexual assault, and toxicology, sexually transmitted diseases, evaluation and treatment, pregnancy risk evaluation and care, discharge planning and follow up care, suspect examination, sexual assault and contingency operations and legal considerations. This is a very good slide for you to have on hand at certain times when you're trying to capture what all is encompassed in a sexual assault medical forensic examination. When you're trying to inform somebody of what happens or occurs during a sexual assault forensic examination, most of the time, you need to make sure that you're capturing these elements, because this is part of what you do.

With these learning objectives, at the conclusion of this knowledge based activity, participants will be able to explain the forensic healthcare team approach, informed consent, patient centered care and trauma informed care. Describe how to perform a comprehensive physical examination and document findings for the sexual assault patient. Explain the management of sexual assault related trauma to include injury, behavioral health, and counseling needs, consulting and referral process and follow up care. Outline drug and alcohol facilitated sexual assault in relation to best practice, patient history techniques and focus evidence collection for the sexual assault situations. Identify the circumstances in which toxicology collection and testing may be indicated for the sexual assault patient. Explain the purpose of medical forensic photography, alternate light source, ALS examination, describe equipment considerations, application techniques and documentation expectations regarding forensic photography and ALS equipment. Recognize how to produce precise, accurate, unbiased, and objective documentation for the medical forensic record for the sexual assault patient. Summarize how to identify, collect, document, preserve, label, store, and handle specimens to maintain evidence integrity for restricted and unrestricted report of sexual assault.

Discuss evidence collection considerations when conducting a sexual assault medical forensic examination for persons accused of sexual violence, analyze local and state laws and restrictions related to the sexual assault medical forensic examination, examine sexual assault healthcare treatment issues during deployment, including remote locations, assess human immuno deficiency virus, HIV, and sexually transmitted diseases or infections, STD or STI testing, prophylactic treatment, and follow up care for the sexual assault patient. Discuss how to assess the risk of pregnancy, provide options for emergency contraceptions and any follow-up care and referral services for the sexual assault patient. Examine how to assess the need for behavioral health services and provision for a referral for the sexual assault patient. Restate how to conduct a physical and behavioral health assessment for the sexual assault patient, identify the prevailing signs and symptoms, mechanisms of injury, implications management, and documentation for nonfatal strangulation. Discuss the legal process of the sexual assault case and the Sexual Assault Medical Forensic Examiner testimony. Those are our learning objectives for today. We're going to go ahead and get started in our very first lecture this morning, which will be the team approach.

You look here with policy and guidelines. Policies and guidelines are very important to our practice and because they help guide what we do as forensic healthcare examiners. These policies and guidelines and SOPs have come a long way since when they were first introduced or when we first started the program. The initial documents that our guiding regulations are the Department of Defense Instruction, which is 6495.02, which is the Sexual Assault Prevention and Response staffer program procedures. There are volumes one and volumes two. We primarily focus on the program procedures and with the 6495.02. Eventually what we're hoping is those will be separated where the healthcare management will just be using the next one, which is the DoDI 6310.09, which is the healthcare

management for patients associated with sexual assault. That is one of our newer regulations, the 6495.02 has been out for a while now. If you're not familiar with what's in the DoDI 6310.09, you're going to make sure that you have both of these documents available and that you have read through these documents.

The Defense Health Agency Procedure's Manual 6025.13, which is the clinical management of Military Health System credentialing and privileging volume four, which is our credentialing and privileging for all of our military health systems. You'll find out that we have a section in there for the Sexual Assault Medical Forensic Examiner, and we'll be reviewing a certain section of that just to hit those highlights that you need as you function as a forensic healthcare examiner in the military treatment facility. Our privileged providers are usually quite familiar with this, with the credentialing and privileging. Nurses as well too, we do the credentialing privileging as well too, but it is usually just slightly, a little bit different, but it's still very important. And we're very fortunate now that they have recognized and added this additional SAMFE credentialing and privileging criteria into this procedures manual.

With the protocols, you have the U.S Department of Justice, the Office of Violence Against Women, the protocol for sexual assault medical forensic examinations, and the US Department of Justice, Office of Violence Against Women, National Training Centers for Sexual Assault Medical Forensic Examiners, these are our foundational documents. Very important that when you had your initial training, you went to that training, you a or may not have realized that these protocols were part of that foundation. Based on the DoDI 6495.02, we have to make sure that we have minimum standards. And minimum standards require that we use these two protocols as our foundation, as we're developing training and education, and as well as providing sexual assault medical forensic examinations in the military treatment facilities.

If you haven't refreshed yourself, this now is the time to relook at these foundational policies and protocols, and also to relook at some of the forms that you haven't used them for a while to go back and look at them. The other forms that are used in this are the DD form 2910, which is the Victim Reporting Preference Statement. Now, you may be wondering why we had put this in here, this DD Form 2910 actually changes. They update it. And sometimes we need to make sure that we're coordinating with a SARC Victim Advocates or with somebody to make sure that we know what information the patient is consenting to and what information's in there. If you read on the DD Form 2910, you'll find that there is a portion on there, where the patient, the SARC Victim Advocate has to offer the patient medical, as well as the sexual assault forensic examination.

And some of that wording in there, this is where we need to pay attention to that because sometimes, and I do at our admin level, for sure. But if you see anything, you need to make sure that you bring it up to us, because sometimes there's always a way that we can improve to make sure that the SARC who is not a medical person most of the time, and even if they are, their primary job is that advocacy portion. Then we need to make sure that, that information they're reading, that's the information that they're given to that victim when they're counseling them or providing them their options. Now just depend, they may not do the other. We need to make sure that it's clear represented on that DD form 2910.

Our DD Form 2911 that we use is the sexual assault forensic examination report. And with that report, we also have the victim and the suspect instructions. That DD Form 2911, that we're using, you need to make sure that, for one, that you have the current version available, as you're familiar with the one that is inside the kit right now is the most current version of the DD Form 2911. You will have to print that off. And so we usually just tell you to have those copies available. They are doing a refresh of the DD Form 2911. And with that DD Form 2911, we're going to have other forms in addition to that. It

may be an encompassing form with addendums to it, where we're trying to move more toward forensic healthcare, rather than just specifically focusing on sexual assault.

You'll hear some name changes and some new acronyms as we move along. And we expand our scope of practice from just providing sexual assault care, but providing care that's needed for forensic examinations. We're expanding that based on some of the National Defense Authorization requirements, and also some of the needs that we're seeing within the military treatment facilities. Again, if you do not have these references readily available, now is your time. You're sitting here now, put that on your to-do list, that you make sure that you have them somewhere. Don't always rely on your program manager. These are just your foundation ones that you can make sure that you read through that you have available because at some point, you will be testifying in court and they may bring up, well, what are your foundational policies? Where do you get your information? These would be one of the ones that you would go to.

Of course, you have your local SOPs. And we are also working within the Defense Health Agency to help streamline that process so that your SOPs will somewhat be standardized just in the way that they're written. But again, with SOPs, SOPs are supposed to be geared toward the process that you do within your military treatment facility. Again, the SOPs that our team is working on, because remember, we're all one great big team here. They're working on those. Again, you will most likely take those SOPs that we're trying to standardize and then augment them to fit what goes on at your military treatment facility. Because the goal of an SOP, is your standing operating procedures is, is that, say I walked into your facility, I will be able to read what's in your facility and be able to walk through it just by reading what's in the SOP.

Usually, when I'm telling people who write an SOP, I say, look at it that way, and then I also give me your SOP to somebody else to look at, maybe somebody that's not even part of the department to look through it because they may come up with something that we just overlook and we just take for granted, and they may have very good questions that can help us provide great information to somebody who's reading those procedures.

The scope of practice of the Sexual Assault Medical Forensic Examiner, of course, on this training today, we have physicians, advanced practice nurses, physician assistants, and registered nurses. And those registered, all of them are especially trained to conduct the sexual assault medical forensic examination. You need to make sure that as appropriate, you follow your practice guidelines, the American Nurses Association, the International Association of Forensic Nurses, IAFN, forensic nursing, skillful practice and standards. And then you also have the American College of Emergency Physicians. Those are just some to use as your guidelines. You need to augment that to whatever your credentials [inaudible 00:22:13]. You need to practice in accordance with the US Department of Justice, national protocol standards for SAMFE and the national protocol for the SAMFE. And like I mentioned earlier, those are part of the Department of Defense requirements that sent that foundation there for how the training practices that you practice under as a SAMFE.

But don't forget your underlying scope of practice, which is your physician, APRN, PARN. You're always that first. That's your foundation. You already are very highly trained medical professional. You now just added that additional training to the Sexual Assault Medical Forensic Examiner, or the forensic examiner, which you'll hear more of. And we're learning more to a forensic examiner. You will hear us talk forensic examiner and SAMFE in this training, they both mean the same thing. It's just that this training here is geared toward the Sexual Assault Medical Forensic Examiner, meaning that the examiner who provides examinations in relation to sexual assault.

With the Joint Credentialing Quality Assurance System, JCCQAS, and some of us know it as CCQAS, you're going to need to provide the supporting documentation. If you're not right now currently

providing supporting documentation, in the near future with the transferring over to the Defense Health Agency, that will be one of the requirements is that these documents will be uploaded in CCQAS. That way they'll be available for whomever to look at and due, that, that'll be the way that when somebody comes in and looks, they'll say well, who's performing these exam? Well, we should be able to go to Joint CCQAS, screw up a report, and we will have our qualified examiners. If the examiner isn't in there, then that's an issue. All this documentation will need to be in there before the person is doing examinations in the military treatment facility. This is where we need to make sure not that it's just sitting in a file, but that it is uploaded in this system. Otherwise, that person shouldn't be practicing in the military treatment facility.

You must meet these requirements for performing a sexual assault forensic examination, and who better than us is to educate our credentialing and those within our military treatment facility. This is our job because we are a newer medical field so we need to make sure that they understand what the minimum requirements are. And that if we have somebody in the MTF that is, saying that they're a SAMFE, it has happened, that we need to make sure that we let them know that these are what requirements are. And so you shouldn't be using those acronyms until you've attended this at a minimum within the Military Health System. You'll take that initial 40 hour didactic training and competency and that is based on those foundational documents. Okay. That's the minimum requirement. Okay?

And then you may have also taken the joint interservice SAMFE course. It would be one of these that you would have attended. Some people are going to be grandfathered, possibly, initially, but everybody eventually will have to take that joint interservice SAMFE course. Or we have had some that were grandfathered in where we went ahead and refreshed them and gave them part of the refresher training. But just so you know, if you're on this call today and you haven't been provided a SAMFE training course, or you haven't attended the SAMFE course in San Antonio or online, that's where it's based out of, that in the future, you most likely may have to attend that course. But we are wavering some in just because we have some examiners who have been grandfathered because they've been doing exams for an extended period of time and worked within the treatment facility even before the joint interservice SAMFE course was developed.

After your initial training, that's where you're at now. If you've signed up and you're in this training now, and you haven't taken a SAMFE training, this is not the training that you should be attending today. It's similar to taking advanced cardiac life support. You don't take a refresher before you take the initial, right? That's the same here. You need to take that initial training. And then this is what you take after that initial training. This refresher training is a requirement based on the DoDI 6495.02 and also the DoDI 6310.09. With this refresher training, that's what you're getting today. You're getting the didactic portion of the training, okay? With this didactic portion of the training, there's a minimum requirement in the policy that you need to have for continuing education credits. This will more than fulfill that need to meet those yearly continuing education requirements.

Not that we just want to limit you to this because there's also very good information out in the field. And this is somewhat of a broad, generalized overview, where if you see a field that you have different areas that you need to focus on, that you want to brush up on, then you're going to have to specifically look for those trainings or we do offer. We're current offering monthly webinars with different topics. And maybe you'll find a webinar that fits a topic of interest to you where we expand on that education a little bit more than we may be able to focus on in the refresher training. Just because this refresher training is just annually.

With the didactic, you two components, very similar to how you had in the training. You had to do the didactic portion and then you had to do the competency portion. With this competency portion,

the verification of competencies, you are going to have to fulfill, if you can see there, four sexual assault forensic examinations. Those four sexual assault forensic examinations by DHA policy. When you go to the DHA-PM 6025.13, that policy right there says you need to have four for SAFE. Those four SAFEs are needed annually. When you do those four sexual assault forensic examinations, they can all be simulation. That is when you fall under the Defense Health Agency. And you're only following the Defense Health Agency policy. Some of you are still using your service policy. Not only do you have to have a minimum of for four SAFE, you also need to follow your service policy.

IF you're a service policy requires that you have more requirements, you need to make sure that you're following those additional requirements. For example, with the Army, the Army requires three SAFEs, and one of those SAFEs must be on actual patient. Well, you still need to have an actual patient. Now, the Army has to do four SAFEs. Then one of those needs to be on an actual patient. And I think that some of the other services like the Navy may have more than four SAFEs. Then you're going to have to do what that requirement is. Once we all fall under the DHA, as far as policy, that's our guiding policy, then we most likely won't have those service requirements within the Military Health System. But for now, please make sure that you're reaching out. If you have any questions you can reach out to myself, or you can reach out to one of your program managers in your area, and we'll try and help you as best we can to make sure that you have met the specific requirements, which is the refresher training and the verification of competency.

If you're not regularly doing sexual assault forensic and examinations, or you're having a harder time getting those simulations done, I would say within our goal for 2022, this FY is to put together a standardized simulation training. That will be packet it that we will put together to the program manager so that they can provide more of an organized type of organized, somewhat standardized within our Military Health System to do the certification of competencies. Now, what we're planning is we hope that this won't overdo. If you do four SAFEs, it may or may not be a requirement that you have to have somebody that you have to do a mock examination. I haven't read that so much in the policy yet. We are having new policies come out, but I just wanted to let you know that we are working at least on that simulation portion of it. Right now we don't know the exact specifics. Right now the way the DHA-PM 6025.13 is written, it's just four SAFEs in its four mock SAFE. Until that changes, that will be the minimum requirement.

Forensic Healthcare Program. This is a busy slide. Right? It is a very busy side right now because it's new. You're going to hear us say, Forensic Healthcare Program, Forensic Healthcare Program, SHP. It's going to take us a while to get used to you using these terms. I still use the forensic healthcare along with sexual assault medical forensic examiner. I use them in conjunction. So I want that person to know what a forensic healthcare I'm talking about, which happens to be at this time, sexual assault. Just so you know, it'll take us all a while to use it correctly, don't feel bad if you use it incorrectly and you're corrected. I'm frequently corrected. I've now been working with this program. I transferred over from the Army program where I've been working with the Sexual Assault Program from 2008, until this transfer with DHA. I was working for the Army. Now I'm over at the Defense Health Agency.

With the Defense Health Agency, now they've changed it to the Forensic Healthcare Program just to broaden our scope of practice. It's taken time and I've been at it for what? A year. And I still have challenges that I'm still learning, which is good, we're lifelong long learners. This slide here, depending on what size of computer you have, it's probably very challenging for you to read each little thing on there. What I wanted to do is give you a glimpse of this is the draft that will be coming out in the policy. Just to know that there's going to be a few different roles and responsibilities within the military treatment facilities. Now, some of the facilities, that will be slight, some of your program managers, your leads are already trying to prep in coordination for some of the anticipated changes to our program.

Again, this is just an outline and over to the side, when you do be able to print out the side, you'll see there some of the list of the roles and responsibilities. Again, this is just a draft. When I provide a draft, does not mean that something might change, but I did want to give you an idea of what it was going to look like for you, okay? The next slide that we're going to go through some of the roles and responsibility, because this is so busy.

And also to note is that once we get that policy out, it's called the D happy, we will provide some training on that. We'll let you know that it come out and then we'll help you as well as, let you read it. And we'll also, hopefully, provide some training in relation to that, so that you'll get a little brief on what some of the main points are. There'll be a timeframe that you'll have to need that for compliance.

Basically, that slide before, this just breaks it down. To me, this slide it's busy, but it's a little less busy, so you can see what we were looking for there. With the Forensic Healthcare Program, we do have a lead program director, which is the FHP-LPD, which is the executive healthcare provider who oversees the DHA forensic healthcare. That would be, Dr. Cynthia Tara Ferguson. And so you're always welcome to contact her. She is basically the lead for the Defense Health Agency program. That's the main person that you would go to with any big challenges. And some of you may have already been working with her because you're working on some of the policies and procedures and manuals and forms that we're working on now. And we plan on having an all team meeting at some time as we transition. But again, within the next year or so, we'll put some together, and hopefully, that'll help you to meet our entire team at the Defense Health Agency. And then also those outlined services that are assisting as well too.

The forensic healthcare market coordinator, FHP-NC, that will be my top. I'm now serving as a market coordinator. The market coordinator coordinates forensic healthcare within inside market area, such as policy education and data gathering. We're at the headquarters level. My market area, and I'm Miss Ray, is the central market, the middle of the United States. However, right now, since there's only one, there's anticipated that there's going to be seven of us. There's only one of me. I do reach out to the other. We've been fortunate enough that we have the Navy and the Air Force helping us. And I had come over for the Army. I'm still overseeing and assisting with some of the Army as we go through this transition from going from the services to the Defense Health Agency.

The Forensic Healthcare Program director, the FHPD, is a doctor, MD, DO, PA, APRN who provides medical oversight to the SAMFE and the sexual assault medical forensic programs. Within some of the facilities already, you have a program director. Basically, this medical director is really just medical oversight. This medical director position is a full time position. Okay. It would be more of an overseeing. Usually, it's an additional duty. This is the ones where, it's very similar to when you have a nurse and then you have a chief nurse, or your charge nurse, it's not always your primary duty.

Anyway, it just shouldn't be taking up 100% of the day. Again, this is not a full-time position. If there's questions about that as we move forward, then definitely reach out to us. This would not something that we would just hire alone with a Forensic Healthcare Program Director as a full-time job in itself. The Forensic Healthcare Program coordinator, the FHP, serves as the primary point of contact at non 24/7 MTF. That's the care coordinator, the Forensic Healthcare Program coordinator. This care coordinator, very different approach than what we were using in the Army facilities, where we were using the RN as a care coordinator. We're not saying that we're taking that away. Right now, this just not identified in the policy, but we still can have that care coordinator element too. It would be the primary point of contact at most likely non 24/7 MTF. And then also be a primary point of contact. Some of our Army facilities already have it, which is a nurse case manager, nurse care coordinator already.

Then you have your Forensic Healthcare Program manager, sometimes called the PM. Here, it just says FHPM, was a SAMFE who serves at 24/7 full-time and the SAMFE lead. This is the National Defense Authorization program requirement. When we're looking at hiring people or the requirement

why we need these programs, we need full-time SAMFE. When we're looking at position descriptions that we're putting PDs together, and we're also here at Defense Health Agency, trying to standardize that as well, too, when we're putting these together, this is where it needs to be. The NDAA, it's a SAMFE. Those SAMFE duties should be 50% or more. Okay? 50% or more should be the SAMFE, doing examination, serving and core. Those are functions that you would do as a SAMFE.

I'm saying sometimes it's as high as 70%. That's the primary duty. Now we may have some people who serve as program coordinators, or that program coordinator, or a program director, they may serve as that as well. Those duties shouldn't overlap the primary duty as the sexual assault medical forensic examiner, because that is where the requirement is, is the full-time SAMFE. Again, just what we're looking at so you understand why those PDs need to be written like that. Will be a SAMFE with those additional duties as the program coordinator, possibly, or as the program director, or sometimes both. It just depends. But I do caution you on overstepping most likely more than two, because based on where you're located at, that can make your responsibility more than possibly what it should be. Sometimes the newer examiners, or if you're newer to a program, you may not know how much your workload is going to take for you. And especially since our program is expanding as well, too, out into forensics, not just primarily sexual assault.

Now we do have the Forensic Healthcare Program follow up provider. And you'll see here with FHP-F, but a lot of time these abbreviations may be subject to change, or we may use a whole abbreviation. I just want to give you an outline. The follow-up provider, basically what it is, it's a person who provides the follow-up care. And this would be a licensed healthcare provider, such as a doctor or PA or advanced practice nurse. With these, this team approach here is that these people will be on orders to provide this healthcare to the patient. Okay. I know within the Army facility, the names have changed and also some of the other services, well, because the names have changed, but we do need to make sure that they are on orders.

It's not just going to be that the patient just follows up within any provider. We're going to have somebody specified as a follow-up provider. Also, one of the things I did not see on this slide here is behavioral health. You may also see, but it was on the slide before this, you'll see that there was... Well, you might not see it, that there is behavioral health component on this slide. On my computer, at the right hand corner, it talks about the behavioral health. I do want to let you know that there are those forensic healthcare, behavioral healthcare components also that will be coming forth. We'll have them identified on our team too, because we know that most of our patients stay, well, based on some of the research out there, stay within the behavioral health component longer than the medical component.

With this team approach, it's welcome that we're so fortunate that you're all here with us today and this team approach that we have here. Usually, when we're doing the live trainings, this will be our opportunity where we would get to know you. This is a little different with this taping of this than you listen in, but we still want to get to know you. With this team approach, if you haven't reached out to, not sure who your program manager is, now might be that time to say, "Hey, I'm out here." You let us know what needs can we do to assist you? That yearly time just to refresh, what do you need? What are you looking at to accomplish this year? What are your goals? What do you hope to accomplish?

I went through our team approach within our own forensic healthcare team, which is very important. We have to make sure that we're taking care of each other, taking care of us, making sure we're providing the best possible medical forensic care that we can. Now with that, we also have the considerations of the patient, the patient, and possibly, family members. Within that, we have advocacy also, right? We have the legal component, we have law enforcement and we have the medical and behavioral health. And you see, it's like a [inaudible 00:44:51] approach that we have. Going around, we don't know exactly what the patient is going to require, but the fortunate thing is that we know how to

reach out and access each one of these, if they're needed or to provide those appropriate referrals if needed that they are available within the community.

When you're looking at putting together some of your resources in the community, look and see what's available. When we're talking about advocacy, you see advocacy there at the top. And that block up there, the red block, we're talking about advocacy. We're not talking about just advocacy within the Military Treatment Facility, we also have advocates in the civilian sector. What resources are available in the community? This is a time to just re-look, revisit that, legal as well, too. Maybe that time that you re-look at it, we do have the military legal, but we also have legal components on the outside law enforcement. This is those times for you to re-look and make sure that you may need to refresh things. Make sure those resources are available.

With this team approach, we have the sexual assault response coordinator and the Victim Advocate and they will serve as your single point of contact on your insulation or within a geographical area. And they oversee the sexual assault awareness prevention and response. And as most of us are familiar with, oftentimes, we get confused as being a SARC or a Victim Advocate, or you're part of the SAPR program, or you're part of the SHARP program. We're hoping that now that we've changed it over to forensic healthcare, since we're a little more broader than just focusing on sexual assault, that that confusion will be less. The SARC Victim Advocate with the SAPR program or the SHARP program, they coordinate medical treatment, including emergency care for victims of sexual assault, 18 and above. And they track the services provided to a victim of sexual assault from the initial report through the final disposition and resolution.

Here we have advocates. These advocates serve DOD military and military eligible beneficiary victims of sexual assault, 18 and above. Just remember, this is the SAPR program is a victim centered program, and we need to be very familiar and mindful as forensic healthcare examiners. When we're doing in our matrix and we're looking at, okay, this patient presented. You look at what is the age of the patient and what is their affiliation with the military? The reason that we have to look at this is because we need to make sure when we're doing our algorithm, that we're contacting the right advocate to assist us. Okay. It's not okay for us just to call any advocate. And most of the time it will be the the SAPR or SHARP advocate and have them direct us. It's better within our policies to be very specific. They're on call too. Let's do the right thing and make sure we're contacting the correct party.

We also have the sexual assault intimate partner violence and age 17 and below. And these will be referred to the Family Advocacy Program. The family advocacy Victim Advocate is a social worker and they have their own notification process. And we do have some of our facilities just depending on where you're located. Some of our examiners are doing adolescents, but we do have adults with the intimate partner sexual assault. Also, we would it be notifying family advocacy. If it's intimate partner sexual assault, it doesn't meet those other specifics that we mentioned earlier, then we would notify the Family Advocacy Program, not the SAPR program.

Just make sure that you're looking at that carefully and that you understand those key dynamics in there. There are instances where the patient may be able to choose which one, depending on if they're active duty and it's still Intimate Partner and Sexual Assault. In some of what I have heard and worked with, the SAPR program does this on a day to day basis. They may sometimes be the ones to go to assist the social worker with understanding or even yourself on what resources are available in the community for the patient. But again, they primarily service that primary population. The Family Advocacy Program covers the adult military dependent sexual assault victims who are assaulted by the spouse or intimate partner, a military dependent sexual assault victims who are 17 years and younger, domestic abuse and domestic violence and a current or former spouse or intimate dating partner, a

person with whom the abuser shares a child in common, a current or former intimate partner with whom the abuser share or has shared a common domicile and restricted or unrestricted option.

This is covered in the DoDI 6400.01. If you don't have this document and you're serving this population, this is just a good one to make sure that you have on hand. Now, if you look at it, to me, it's a fairly larger document because there's only certain portions of it within that, that pertain to certain areas. But just so you are familiar with it so you would know what policy, if you're going to end up starting a program, or you need to just refresh, sometimes some policies are updated. You'll have to work with the Family Advocacy Program there. And so it may be that you need to have them come talk to your staff. I know for the Army, they have to have quarterly meetings. If you have your quarterly meetings, it may be an opportunity for your local family advocacy to attend those meetings as well, too.

You should have a representative. And most of you'll have a representative from behavioral health in your team meetings anyway, because it's right, it's a team, it's a holistic approach. It's not just forensics. We have medical behavioral health within the facility to help. Based on our policies, we have the Sexual Assault Review Board still, or it's called the Sexual Assault Management Group, CMG. You'll hear SARB/CMG. They basically mean the same thing. It's just that we were used to sexual assault, SARB, in the very beginning. This is where they provide oversight, procedural guidance and feedback concerning the installation of Sexual Assault Prevention and Response. Now you should have, if you have a program, whether you provide care in the military treatment facility, or if it's provided with an MOU or MOA, there should be a medical and a behavioral health representative in attendance.

Now there may be cases where there's not medical care involved and then possibly you wouldn't have to sit on those ones, but you should be invited to the SARBs and the CMGs. And now it's not just you in particular because they're usually five or more SAMFEs at a location or so. It would be one representative. And most of the time the medical representative we want is we want somebody who's familiar with the Sexual Assault Program. Usually, you wouldn't have your DCCs or somebody represent you, you would be the representative to assist with that. That's the point of having that identified medical and behavioral healthcare representative on there.

We have the healthcare service payment. Now we added this into this slide, this year. And part of the reason we did that is because we wanted to let you know that depending on where you're, there may be different health service, or payment options or different patient populations that come in. And so you need to be familiar with the services that encompass the forensic healthcare examination. Now with TRICARE, TRICARE does cover the sexual assault medical forensic examination. Okay. TRICARE does cover the medical portion as well, too. TRICARE, currently, does not cover the suspect examination. That's where some challenges within our facility and coordinations with MOU/MOA facilities for law enforcement, because it's law enforcement who is ordering that examination. This is where some of those elements can be a little bit tricky. Make sure that if you're having some of those challenges, I even worked with some of our law enforcement on some of the suspect information, that you bring it to your program manager's attention, or bring it up to the market coordinator, which will be called in the future. And we can see what we can do to assist.

We're not trying to create any new problems. We just want you to be aware that there can be some challenges out there. We're very fortunate with the Violence Against Women Act, VAWA. I'm not sure that has been renewed. I'm hoping maybe it would be renewed in the future, but it has a good foundational element for us where it was payment for the sexual assault examination. Some places, States will also have the Crime Victims' Compensation. You need to check that even if they are military, they still qualify for the state, the Crime Victims' Compensation, that's available on the economy with the state. Okay. That would be something to investigate a little bit further.

Health insurance. You may have some that are not eligible beneficiaries for TRICARE within the military treatment facility. Again, right now, the sexual assault examination, they can't bill for the sexual assault examination, but they can bill for the medical care that's provided. So say that they have a broken rib, that medical in nature. That would be billed to their health insurance. And there may be other payment options available, those that don't have health insurance or, however, else it's being funded. I just wanted you to be mindful of that, that there may be different situations based on the patient population that you're seeing within your area. And especially as we expand our scope.

Now we're going to move on into informed consent and patient centered care. We went through the team approach and now with that team approach, it's just natural for us to move into, how are we going to now take care of the patient when they present? We're going to move on to informed consent and patient centered care. All right. Again, you've probably already realized that I'm a policy person. I'll tell you in the very beginning, I was not as into policy as I am now. But I will say that some of the laws and the policies that we have, some of them are very beneficial for us because it helps us to secure the resources that we need to continue providing excellent medical forensic care to our patient population. And some of this has to do with some of those laws that are put in place that have moved us forward.

Since I had started in 2008, they've moved us forward to where we are today. Now we've had struggles throughout, but we're very fortunate that we are here. Again, we go back to the DoDI 6495.02. And this helps guide us on what should happen if a healthcare personnel receives a report of sexual assault? We'll call the SARC Victim Advocate. Now this DoDI 6495.02 is mainly focused on the adult population. Okay. It's the military person. That's where you have the SARC Victim Advocate program. We're trying to, in broadness a little bit, not just referring to the SARC Victim Advocate, you will hear us say it, but we're trying to make sure that we're, maybe in the future, just say advocacy, because you're going to call the advocacy program. Because with the advocacy program, then you can determine, is it going to be the SARC Victim Advocate, or is it going to be, which is part of the SAPR/SHARP program, or is it going to be the Family Advocacy Program, or is it going to be the Civilian Advocacy Program? It's going to depend.

When you put that on your little checkbox, which way you go, that will help you. With the SAPR program, the SARC Victim Advocate will provide guidance on all associated counseling resources and support service to include the SVC, special victim's council on the victim's legal council. This is wonderful. This is so nice that we have this feature because some of us were around prior to this being where we utilized the SARC and the Victim Advocate. And now we have the FCC and the DLC to also assist. They were the only ones that fill out that DD Form 2910. Okay. We don't fill that out. Family Advocacy doesn't fill that out. That is specific to them, specific to their form. Currently, right now, we don't get a copy of form. We're not really involved in that process of that form.

But again, most of us, when we're doing those examinations, we want to ensure that they're speaking to the SARC Victim Advocates so that they can provide those appropriate resources to the victim. Not that we want to hold up the medical care, it's just another part, teen element, a very important teen element to provide that victim information and resources that they may need. The DOD 6400.01 is part of the Family Advocacy Program. Unless the Family Advocacy Program, in this, you would contact an advocate. And that advocate is the one who is going to go through the reporting options. Again, with the different program, you just need to be mindful of who does what. Again, it's not that we can't broadly go through what the reporting options are going to be, but when it comes to those specifics of the reporting options, it's the SAPR program. Those are the ones that are going to... They're the ones that are going to give those recording options. Okay. I want to make sure we're on track here.

When you go through informed consent, I do want to let you know that the joint commission also [inaudible 01:00:01] very highly of you being informed consent. I don't know if somebody would give you a hard time, but if somebody's questioning why you're taking the time that you're taking with the patient and providing it, you need to refer back to the joint commission standard. And the reference here is in 2016. "It's a process of communication between a clinician and a patient that results in the patient's authorization or agreement to undergo our specific medical intervention. The process of obtaining informed consent is an essential aspect of patient centered care." Again, I really just challenge you to go back to that. And also when you're looking at it, are we really providing victim or suspect patient centered care? Is it where most of our patients are going to be a victim or a suspect? We don't use survivor here as much. Again, making sure that you are focusing on patient centered care will be very important.

Okay. I need to have somebody advance my slide. In this slide here, we have our informed consent considerations. This is a process of effective communication between a provider and patient and not a signature on a form. I just want to highlight that. I probably should have just underlined it. It's not just a signature on the form. Okay. How many times have you, just thinking of yourself, find a form? They'll be, "Here, go ahead sign this form." Maybe they'll give you a little bit of information on that, maybe not. Maybe we just feel, it's just a form you need to sign. We need to make sure when we are doing our informed consent, that we are discussing the options, the risk, the benefits, the consequences, and the limitations. We need to use clear, concise language. We need to address language barriers, special circumstances, incapacitated patients and cognitive disabilities.

There's a lot of information that we need to cover when we're doing this informed consent process. Some of this can be lengthy. We need to know what informed consent really means. We need to recognize our patients. And we need to know how to handle consent. Some of this is incorporated by making sure we have a clearly written policy. In your MTF, do you have an informed consent policy? If you're thinking, "I'm not quite sure." Most likely you do. And so you need to go back and revisit that policy and make sure you're providing informed consent. And it may be, we do forensic healthcare sexual assault, is it specific to forensic healthcare and sexual assaults? Our patient population it may be a little bit different, we need to make that, are they being given the appropriate amount of informed consent to make their decision? We need to ensure patients understand what they're consenting to undergo. We need to use everyday language instead of medical jargon. We need to allow the patient time to consider the information. We need to identify five cultural language preferences.

Again, just going back in the beginning and the end that we need to make sure that we're providing them oral and/or written communication, and making sure that there is that clear understanding. And it reminds me of where most of us, when we read the consent, it was, "Would you like me to read the consent or would you like to read the consent?" This is just a way for us to at least engage one of those senses so that we know that they're not just finding a form. It gives us those opportunities to address and see if there's any additional questions that, that patient may have. Sometimes they have family members, too, but the patient themselves, just so we can address them and it's a great time to address them. But it can be lengthy in the process, but it is something that we need to make sure is being done.

With informed consent, you have the restricted and the unrestricted option. With the unrestricted option, as you can see here, we put some of it in red. Okay. With the stuff that's in red, this is just a recap and you get this annual recap every year of unrestricted and restricted reporting. As you know with us being healthcare providers, our role is a little bit different than just the regular person, as far as the reporting options. Okay. You know that with restricted reporting option, you're going to have to make sure that you capture that RRCN number. I think that's a big one for us.

So is that process working for you? Is there a better way that you can make sure that you access and get that restricted reporting number? This is part of the reason that we need to know beforehand, what option that the patient has chose so that we know which way the kit should go. Having the patient be giving, I know that it can be time consuming, it's not that we want to hold up medical care, but we need to know where this kit should go. Is it unrestricted or is it restricted? Okay. If it's a restricted case, then we need that RRCN number and then it may go to a different location. And we have, Commander Hernandez. We'll talk a little bit more about it later, as far as where we're storing the kit into some of the different processes that the facilities have. In the future, hopefully, maybe it'll come together and we just have one place that these kits go to for the restricted reporting option. However, that's not the case right now, each service handles it different.

And you can see here with the unrestricted, where we have the involvement of law enforcement and the victim witness liaison. Okay. And we also have legal, whereas we may not have those services with a restricted option. Yeah, there's a restricted option. I did want to see that we have the CATCH program. Not that we need to be able to verbalize and tell the patient what a CATCH program is. We feel that it's good for you to know that there is a CATCH program, but the CATCH stands for catch a serial offender. And the CATCH program gives people making a restricted report an opportunity to anonymously disclose suspect information, to help the Department of Defense identify serial offenders. Just to let you know that, that is another option that's available with the SAPR and the SHARP program.

With informed consent, you need to show you are aware of your local jurisdiction and individual life and responsibilities for reporting domestic violence. It's very similar to, what are your reporting options? All healthcare personnel who receive a restrictive report will maintain confidentiality to the extent authorized by a law. And we know that patients may decline any service offer to them. As a healthcare provider, you need to document, and document and document, if the patient declines and document which services they were declined.

When you go in a little further, Commander Hernandez, you will let you know once they've consented to something and you collected it, what you need to do. And most of the time it's after if they decide later on, we still have to keep those. But again, they're on, we wouldn't collect anything. They can change their minds at any time. If possible, you need to inform the SARC of the patient's request if it's with that program. You can assist the patient if they're declining not just certain portions of the exam, but if they're declining certain services.

This informed consent, you need to be aware of non-accidental injuries, weapon involvement, which may include strangulation. You need to know what, what the reporting laws are for your state. A quick way to determine your state requirement is to go to rainn.org. They have a public policy tab and you go ahead and you input your zip code and your state information will populate. To be mindful that a vulnerable adult can be anyone over age 18, who has a physical, mental, or emotional disorder that makes it difficult for the person to care for themselves without help, and to protect themselves from maltreatment. It can be in that hospital, nursing home assisted living housing, foster care, people who receive services such as home care, day services, personal care assistance, or other licensed services.

Maltreatment can include abuse, including physical, emotional, and sexual abuse, use of restraints, involuntary seclusion, or punishment, neglect, including failure to provide necessary food, shelter, clothing, healthcare, or supervision, because of neglect by a caregiver, or because the vulnerable adult cannot need their own needs. It can also be financial exploitation, including theft or withholding of money or property and/or money or property, not for the vulnerable adults benefit. Again, just want you to be mindful of what is informed consent and what is going to be reportable.

Okay. With confidentiality, we know that there are laws and regulations that dictate the release of information, duplication of our medical forensic documentation, our photographs, our video images, our samples, our sexual assault evidence, collection kit, which will eventually be called forensic examination collection kit. It'll be very similar to that. No matter what, there are things we shouldn't just be releasing. And so just, if you have questions, you're concerned about how you're releasing this information. We always can go back to medical records. Medical records is the one who, it is a medical forensic record.

And I know that's going to be a change for some, where we're going to keep these copies of the medical record, but we're going to be starting keeping copies of them and have them available, which we need to have available so that we can go ahead and do our peer review and also use them for case review. HIPAA also has restrictions on it too. Just be mindful of that. Even when we were talking about the SARB or the CMG, you need to be mindful of what information you can share in that environment and what is really appropriate to share.

Healthcare providers may release information with consent. It can be implied oral written consent from a patient with authorization. The patient must be given authorization to release health information to a non-healthcare entity. And where this comes into play is I've heard frequently lately it's come up, that the SARC is asking for a copy of the DD Form 2911. Well, they're a non-healthcare entity. The patient must give written authorization to release that healthcare information to the SARC or Victim Advocate. And the reason that they are asking for this information is because of their [inaudible 01:12:13]. Okay. It's just a check the box kind of thing is why they're asking for it. If you do have any concerns, please make sure you contact your program manager market coordinator, or director.

We also know that there are federal and state laws that mandate some of the release of information. Just to me be mindful that some of that information, it may end up being required to be released. Additional concerns can be that the SAMFE must be clear to the extent at which they can share information, as we discussed earlier with a SARB and the CMG or anybody else that's not part of the healthcare team. Patients must be clearly informed about the use of their records, including photographs or training, and to review.

We're very fortunate in the upcoming forms that are being revised, that we've added some additional information in there. It is very clear to the patients what those photographs and their documents will be used for. You need to look at your local policies related to the relief of records, photography, storage release, and response to subpoenas. Again, with the subpoenas, we need to make sure with subpoenas also subpoenas should be going to your legal department. You should not just be taking those subpoenas and without the legal component in your MTF and going. Again, there are certain elements in subpoenas that as common or more common healthcare people may overlook is what I've been informed by legal, just to some of the specific language. We need to be very clear that your command knows what that subpoena is for, and that you understand what your boundaries are. It's only to help you.

Also, the known estate requirements and informed consent. And that's mentioned in the DoDI 6495.02. With the neurobiology of trauma, we've got to consider how the psychological process that's occurring during a traumatic event. And this is known as the neurobiology of trauma. We don't have a lot of time today to do an exhaustive over view of the subject. This is really just a high level recap of the process. When an individual perceives a threat, active or passive, defensive strategies surface in response to the increasing threat assessment. These strategies include hyper vigilance, which is that freeze alert fight, or flight, tonic immobility, freeze, or flight and collapse. The initial response to that potential threat is often hypervigilant. In this state and individual assesses the threat while minimizing the risk of detection by freezing. If that threat is perceived as increasingly dangerous, you have two

stress related pathways are activated, the limbic system and the hypothalamic pituitary adrenal, which we'll be calling HPA access.

Within the limbic system, the hippocampus and [inaudible 01:15:22]. I can't get it today, oversee the formation of a long term memory. And the hippocampus processes information into memory through encoding and consolidation. These processes organize the information and store them as memories in the regions of the brain. The [inaudible 01:15:37] analyzes by signaling the HPA axis to elicit emotional and behavioral responses. In addition, [inaudible 01:15:47], I'm going to get it wrong all day to day, process emotionally charged memories, especially those laden with fear or terror. In this traumatic situation that alerts the HPA axis, leads to an individualized hormonal response focused on survival. Those four hormones are released in very minimum amounts based on that signal that was received. You have the catecholamines which may surge to sustain either the fight or flight response through stimulation of the sympathetic or parasympathetic nervous system.

You can also have the glucocorticosteroids which may be released to provide the energy needed to fight or flee. These elevated catecholamines and cortisol levels also affect the prefrontal cortex by impairing the ability to make rational decisions. To compensate for the physical and emotional, painful stimuli, these opioids, we have endogenous openings that block the pain, and then we also have oxytocin to promote those good feelings. They may be dramatically increased. These elevated androgynous opiates may cause the individual to have a blended effect. The limbic system, it's a very sensitive to these hormonal fluctuations, all of which infect the encoding, consolidating and retrieval of memories as well as behavioral responses.

While memory coding, storage and retrieval may be affected, the memories formed are accurate. When the brain interprets the threat as an entrapment, without the ability to escape, that's when you had that freeze fright survival response. In mammals, this response is known as tonic immobility. Within the context of sexual assault, it has been referred to as rape induced paralysis. This tonic immobility is an autonomic response wherein an individual experiences involuntary muscular paralysis. They can have maybe suppressed ocular behavior, tremors, periods of eye closure, analgesia, increase in their heart rate and sometimes their body temperature. But usually, during this, memory and learning remain intact.

Lastly, if the other defense strategies are deemed ineffective, the body enters a collapsed state to prepare for injury and death. Then the parasympathetic system dominates resulting in a decreased heart rate, decreased restorations and mobility. These endogenous opioids fled the system to buffer the MPD pain. Really, having an understanding of psychological response and immediately surrounding a traumatic event like sexual assault.s Provide insight into the variety of behaviors and effects displayed by an individual surrounding the event.

And most of this information here today, and then remember, this is just a high level recap for you, and you may have to come back to this. You maybe need more. It's just to remind you to educate others as well as yourself on that neurobiology of trauma and how the patient may present. And the reference used here is listed here at the bottle by Campbell 2012, Cueva, Calleb, [inaudible 01:19:03]. We do have reference lists in the back. You'll be able to pull up those articles, or we're going to give you a handout with a reference list. If you look specifically at this, you'll be able to reference those. These are ones that I would make sure that you have available. Once you may need to reread up on a little bit more. Usually, during the trainings, we try to challenge you to pick something. What are you planning to do? And a lot of times it's updating your list of references.

With trauma informed care, we know members of the healthcare team provide trauma informed care. The substance abuse and mental health and risk administration developed an excellent publication title, the concept of trauma and guidance for trauma informed approach. This context here

today that we're talking the trauma informed care, trauma approach framework is essential to the context of care. This context in which trauma is addressed, or treatments deployed, contributes to the outcomes for trauma survivors and for those people receiving services and individual staffing the system. This concept here located by this reference here of trauma informed care is grounded in the set of four principles here. And that these are your basic assumptions, which are realizing, recognizing, responding, and resisting. With realizing, you really think that the trauma has widespread impacts that aren't complying to one specific specialty like behavioral health, but is integral in other systems such as the child welfare, criminal justice, primary healthcare, military mission operations. And it's often a barrier to effective outcomes in those systems as well.

Also, recognizing. You need to recognize the signs and symptoms of trauma in patients, their family members, coworkers, and other system stakeholders responding, responding by integrating knowledge on trauma into system wide practices, policies, and procedures that support staff training to ensure all members from the person who greet the patient to the front desk, to the board of directors, CEO, that we've changed our language, behaviors and policies to take into consideration the trauma experience of each person and interact with regardless, or if they are a patient or staff member or a contractor. That last assumption there is resisting. Resisting the re-traumatization of patients, staff members, and family members. What's that mean? Meaning our routine medical practice. We may inadvertently create stressful or toxic environments that interfere with the recovery of patients or staff's wellbeing.

Members who work with trauma informed environment are taught to recognize how the organizational practice may trigger painful memories and retraumatize clients or patients in trauma histories. For example, they recognize that entering a patient's room without knocking or identifying themselves, or keeping a patient's chest exposed during an examination may be retraumatizing and interfere with the healing process. It's just a good reminder for us as forensic healthcare providers to make sure that we're looking at the four Rs. And so for me, these are ones I have to write down, that are four Rs. I need to look, am I addressing these? Because again, we need to make sure we're providing that trauma informed approach. We're moving on, just like with the basic assumption, these principles are applied throughout an organization from the ground level up. The goal is to create a culture in which all members within the team participate in this shared decision making.

The trauma informed care and practice is this strength based framework here, and that is grounded in the understanding and responsiveness to the impact of trauma. As we mentioned before, people often experience services in our healthcare services as unsafe, disempowering or invalidating. For us to counteract the trauma informed practice emphasizes a physical, a psychological and emotional safety, both for you, the provider and for the victim or the survivor or the patient. And it creates an opportunity the patient to regain a sense of control and empowerment. If you look here, we have the trauma informed practices. We have to safety, trustworthiness, and transparency. We have peer support, collaboration and mutuality, empowerment, voice and choice, and we have cultural historical, and gender issue.

And so when we look at these here, we have safety is a high priority. And we have trustworthiness and transparency, and that is transparency to those members, patients and family that peer support. We're healing together, collaboration, this recognized that all individuals have a role to play in creating and maintaining a trauma informed approach. And we also have strength and experiences emphasize to help build resilience and promote healing. And we also need to take in those cultural and historical and gender issues.

And here, we look at this, we have red and green here. What does the trauma informed practice look like? We've included some dos and don'ts here for providers, for any individual who has

experienced acute trauma. This book here, this reference here has a good pocket book that you can use. And you'll notice that there's recommendations that are consistent with the basic assumptions and the key principles from these previous slides. If there's some things we need to avoid are, express unsupportive comments, such as, get over it, pull yourself together. Why did or didn't you. We need to also not promote negative coping. Don't encourage that. Also, not ignoring patient comments revealing use of negative coping mechanisms, such as underage drinking, substance abuse. You need to avoid that. Remember, we need to create a culture in which everyone provides trauma informed care.

Environmental services, don't bargain front desk personnel, no unsupportive comments. Providers, managers, wherever it, it's our job to make sure that we promote a positive environment. This is just a list for you to be aware of. This patient centered care, love checklist. This is supported by our Department of Justice. This checklist here, sometimes we always think, okay, we go in, we know we're doing the right thing. It's just on autopilot. But are we really? This checklist here is just a good way for us sometimes, maybe even wherever it fits into, I have I done all these? Even you writing your policies, have I given them priority status, ensured their safety, provided a cultural response, offered these VA services?

Have I accommodated the request for a support person? That's usually one we have to write. Make sure that those are available. Not just maybe, it's a Victim Advocate, maybe it's somebody else and letting them know why or why not we can have them in during certain portions of the exam. Respect gender preferences, assess and respect patients, priorities. Address safety and physical comfort needs and provide information. This is just a good checklist because sometimes in the middle of night, we just have a lot going on and we may think we've addressed it. But if we check it off, guess what? Most likely we addressed it.

In this slide here, this is the last slide for this presentation here. It's just a protocol example. It's small. It was provided to us by Navy Medicine. We will have these available also as a reference, or you can get with your program manager. If you're looking for a flow sheet, that works. This is not a policy, which is a flow sheet to help within the facility. And within our next presentations, you will hear them mention back to some of these protocol examples. Again, we're going to be moving on. If you have questions throughout this presentation, please make sure that you're writing them down. Okay. And we will go ahead head and you can email us and let us know, and we will address those questions.

Speaker 1:

We're good to go.

Commander Rachel Hernandez:

Thanks. Good morning. This is commander Rachel Hernandez, and I'll be walking you through the next series of lecture here on the sexual assault medical forensic exam, and then also medical forensic documentation.

We're going to use a case scenario for certain aspects of, not only this lecture, but a couple others as we learn together today. So, our case scenario includes a 25 year old female, who presents to your facility for a chief complaint of sexual assault, which occurred less than 24 hours ago. She has spoken with a victim advocate, who is present with her today and she has chosen unrestricted reporting. However, she is still undecided about whether she wants a medical forensic exam. I would like to talk with you, the forensic healthcare SAMFE, before she reaches her final decision.

So, there's some essential elements about the exam and about yourself that you want to be able to communicate to the patient. So, I think we're very accustomed in our everyday roles, whether you're in a clinic or ED or whatnot, about introducing who you are, what your role is and what to expect from the patient encounter today. And then your role as a SAMFE, you should feel comfortable doing the same thing. So, I always say that you should practice your elevator speech so that it feels natural when you're communicating with a patient. We want to make sure that our patients are not re-traumatized by their experience with us in the healthcare setting. So, I'll just give you an example of what I might say to a patient when I'm introducing myself and greeting them for the first time.

So I say, "Hi, my name is Rachel. I'm a nurse practitioner. In addition to that role, I do have additional training in helping patients who have experienced sexual assault. While you're here at our facility today, I'll be helping to direct your medical care, which includes assessing you for any injuries, we can talk about prophylactic medications for sexually transmitted infections and pregnancy and we can ensure that you continue to get the care that you need after your discharge today. I also can provide forensic here, which includes examining the parts of your body that were involved in the events that brought you here today and collect any potential evidence that we might find there. So, this forensic component could include swabs, photographs, and also examining the genitals if that's appropriate today. So, I'm sure the last few hours or days have been extremely overwhelming. And I want to make sure I answer all of your questions and that you feel safe here. So before we get started, is there anything that you need?"

So, you can come up with your own elevator speech or you can listen to that again and write it down, but you just want to practice it, make it smooth, get together with the other SAMFEs on your team and practice rehearsing what you would say to a patient.

So, there's two purposes to a medical forensic exam and there is a name of the exam there. But the primary focus is always the health and wellbeing of our patient. We're always going to assess their physical and mental health needs and treat those as the priority, including any injuries that we identify. And of course, education and follow up is certainly important for all patients, but especially for those who have experienced sexual assault.

And then the secondary purpose of our exam is that forensic component. Now the forensic component could lead to many things. Often we don't know what the forensic component leads to, but it could potentially identify an assailant. It could corroborate facts of the case or potentially end up in the exoneration of the suspect as well. The main thing that we want to keep in mind is that the collection of samples, the completion of a kit should not be the driving force behind our patient

encounter. We really need to see the patient in front of us and see what their particular needs and desires are and let that be the driving force behind the encounter.

So, there's several components to the exam. And we need to keep in mind that, as I said, the priority and the care of the sexual assault patient is their health and wellbeing and that every patient comes into our facility for medical forensic care does have the potential to develop healthcare related sequelae from the violence they experience. So it's imperative that a comprehensive evaluation is performed. So, we want to do a thorough review of systems followed by a head to toe assessment. And we can expect this to take anywhere between three and eight hours for a complete medical forensic exam that includes sample collection and also depends upon the complexities of the patient and their assault history. And this timeframe does refer to the point at which the patient presents to our facility until the time that all documentation is complete and the kit is turned over to the appropriate entity.

So once we have done that comprehensive medical exam and we collected any potential evidence, we also are going to discuss, of course, any evaluation treatment for sexually transmitted infections and pregnancy, and then can provide crisis intervention and referrals too. I also just wanted to mention as well that the medical forensic history does consist of two different components, the general medical history and the history of the chief complaint, which is the sexual assault. And as with all other medical issues, emergent care is driven by the history, and it's no different with these patients as well. And because our role as the SAMFE is one of healthcare and not investigative in nature, SAMFEs really, we need to ensure that the information that we're gathering during that history component is what is needed to provide the most comprehensive care to the patient and just making sure we stay within the purview when we're considering what questions to ask our patients.

So, the current guidance per the DD 2911 instructions, also from the Defense Forensic Science Center and the Department of Defense is that we should conduct a save for up to one full week or 168 hours following a sexual assault or longer if particular circumstances dictate. Now, if you are familiar with your local state guidelines, or maybe you work closely with the MOU facility, you may be aware that we have a little bit longer cutoff times than most civilian facilities who usually are around 96 or 120 hours for those collection timeframes. There is some research that suggests that DNA can be identified even beyond our 168 hour cutoff timeframe, particularly from the cervix. So we really do have to consider our patients presentation in history as well when we're talking about time and considerations. And I'm going to go into that a little more here in the next slide.

But we, as examiners and also our law enforcement counterparts, really need to make sure that we continue to educate ourselves and find resources to help us to be able to provide education to our patients and helping them make a well informed decision about the timing for sample and central evidence collection.

So, the SAMFE should always use their best clinical judgment and certainly a patient centered response when considering the timing of collecting samples. We need to be able to answer our patient's questions and also provide them additional information on how, if we have a delay in reporting, how that can affect our ability to collect samples that would be adequate for analysis, even potentially to identify injury. And also many of the medications that we use for prophylactic treatment, for sexually transmitting infections, HIV and pregnancy are time sensitive. We just need to be able to explain that to our patients. They also consider we ask about post assault hygiene activities and how that could potentially impact our ability to collect adequate samples and then our patient's preference as well. So, depending upon also their history, it may be appropriate to collect outside that timeframe if there was an issue where the patient was held captive, or they were bedridden or whatnot. So, we need to consider the whole clinical picture in conjunction with the guidelines that were given, and then use that individual patient centered response when considering the timing of collecting samples.

So, we'll go back to our case scenario here. So based upon your excellent explanation of the medical forensic exam, she decides, the patient decides to proceed with proceeding with the exam. And she asks you if her boyfriend, who is in the waiting room, can be with her during the exam. So normally if this was live, I would ask you to comment on what your recommendation would be. Either A, the boyfriend should stay for the entire history and exam, B, under no circumstances should the boyfriend stay, or C, provide education to the patient regarding support person, other than the victim advocate, staying with the patient, including risk and benefits. I'll just pause for a second so you can think about maybe what your answer would be.

Hopefully you picked C. So, certainly we want to provide education to our patients that someone other than the victim advocate remaining in the room with them is not advised per the DOJs standard protocol. The support person could be seen as causing the patient to maybe adjust their history, or even if they were to speak up for the patient or comment on the history, that can be negatively affecting any legal proceedings going forward. Now, certainly our job is to educate. It is up to the patient to make that final decision. So, I'm not advocating for an argument with the patient. Just advocating for you educating the patient, helping them understand that their victim advocate is protected under military rules of evidence, whereas their support person is not and that we just need to make sure that we support the person, but provide the education and then empower them to make the appropriate decision.

All right, so we've determined who's going to stay in the room with the patient and that she wants an exam. So, we're going to go ahead and open the kit. And upon review, when we're looking at the documents, the examiner realizes something about the documents that are inside the kit. I'll give you a second to think about what that might be.

And hopefully you know that the documents that are inside the kit are from 2011, which are currently outdated. And currently the most recent published forms are from 2015 and that is what we should be documenting on. And we can see the link there on the screen. If you somehow don't have a current copy of the 2015, 2911, that link will take you to the appropriate place where you can print out not only the 2911 but also the instructions that go along with the kit.

All right. So you want to make sure again, that you have the most current version. The 2911 is used to document exams on both victims and suspects. Well, please keep in mind that it is not a complete medical treatment record. We'll talk in a few minutes about documenting in the patient's medical record. But what is documented on the 2911 is only pertinent to why the patient is with us today and does not necessarily include an exhaustive medical history. There are instructions for completion of the form, ending exam for both victim and suspects as well and recommend having those printed out and reviewing them periodically, especially if you're at a low volume facility or maybe you're deployed and you don't anticipate doing these exam with much frequency.

So, when you are preparing to do an exam you want to ensure that your room or the cart that you're using is well stocked. You want to make sure that any equipment that you're using that it's been cleaned since the last time it was used, that it's in working order, that anything that needs charging like a camera battery or an alternate light source is plugged in so it's ready to go. If you're using an assistant that they are prepared. Most places have a chaperone policy and all services have a chaperone policy. So being familiar with what is required at your facility. And then have think multiple pre printed labels can make the process go a little smoother since there's quite a few things that we are labeling generally in these exams.

So, the kit is standardized. It's used across DOD, all facilities. So, if you're here in San Diego like me, we're going to have same kit as the person who is in Europe or Asia. If you need the information for how to order these kits, it's there on the screen. You do want to make sure that your kit is not expired.

So on the side of each kit there is a label with some expiration dates, which includes the things in the kit that expire would be like the lancet and the cognitive applicators. So if all you had was an expired kit, consider what inside the kit is expired, and you could potentially replace those items. If all you have is a kit that is expired.

Before you use a kit, you want to make sure that the seals on the side, that they're intact and if the kit itself is not damaged. If you do have a damaged kit or a partially opened kit, you would certainly not want to use that one and proceed with finding another kit to use.

We often use additional supplies as to what comes in the kit. So, additional things you might need would include more swabs if you're using colposcope, because your credentialed or competent to do so for further injury identification. You might also use toluidine blue or Foley catheter to help further assess injuries, paper grocery bags for those larger evidentiary items like jackets or shoes, additional evidence tape, a swab dryer. So, I do want you to keep in mind, you don't have to have some big, fancy swab dryer in order to have your swabs dry. You can certainly just use a swab rack, or you can make your own swab rack out of a glove box or whatnot. You just need somewhere that you can set your swabs that they're going to be secure and that they're going to dry and they're not going to be cross contaminated. Of course, you're going to have your kit, your toxicology kit, if that's appropriate, a camera, an alternate light source, and then an L-shade or ADFO ruler.

So, as you're thinking about organizing your exam and how you're going to conduct the exam, keep in mind that there's no one right way in order to do that, including one right way to do the patient assessment. So, some examiners may choose to do as much with the patient closed prior to having them undressed while others may immediately have the patients change into a gown. Some, they prefer to simultaneously collect samples and photograph findings while conducting the physical assessment. Others choose to complete the various components one at a time. As long as you are keeping the patient as the focus of the process and allowing their needs to guide the exam and not the evidence collection kit, and that you're able to verbalize your own exam process, those are really the key issues to remember in organizing your exam.

All right. So, we're going to look at the 2911. I'm going to click through a little bit here. So, there's some common things that might be missed or misunderstood on the 2911 and we just want to highlight that. So, you want to keep in mind that different demographic information is collected and/or recorded based on whether you're doing an unrestricted or restricted kit. Keep in mind that for restricted, much of this information is not applicable because we do not want to collect any patient identifying information. Whereas unrestricted we're collecting all of it.

So, at the bottom third under where you're collecting like ethnicity and rape, there's the arrival and discharge date and time. Frequently, the discharge time is missed because we have to go all the way back to the beginning. So just remember, once you've finished your exam to come all the way back to page one and make sure that that gets documented.

So, back on that previous slide at the bottom and the bottom third is where we verify with the patient there reporting option. So remember it is not our role as the SAMFE to counsel them on their reporting option. That is the role of the victim advocate. And the victim advocate will educate them and will confirm their reporting option on the DD 2910. It is our role as the SAMFE to verify what the patient has chosen in conjunction with the victim advocate. So the bottom of that previous page, we're just, like I said, confirming whether they have chosen restricted or unrestricted reporting.

So, Ms. Ray talks quite a bit about informed consent. I'm just going to hit the highlights one more time, but this is found on page two. It is required for all victim exams. So as you're going through this, the patient may verbalize that they don't want certain aspects of the exam, maybe that's photos or

a blood draw or whatnot. And this is our opportunity to help answer any questions that they might have about those aspects of the exam, discuss options they have, risk, benefits and any potential limitations. We certainly want to speak in a way that our patients understand. There's a lot of, if you will, big words or jargon in the patient consent. So we do need to read to the patient, but they may need us to kind of summarize or paraphrase those statements as well, to ensure that they understand. Of course you want to address any language barriers just as you would with any other patient including using a language line. You never want the victim advocate or a family member to serve as the interpreter.

And just keep in mind that a patient needs to be clinically sober. And if they have any cognitive disabilities that we may need to pause, we may need to contact maybe our hospital's legal team or ethics committee just to ensure we're doing the right thing.

While we treat these patients as emergent to ensure that they're not sitting in exam room for hours and being re-traumatized by the medical system, generally the conduction of the exam, the collection of samples can be delayed for a little bit to make sure that we are doing the right thing by the patient and ensuring we're following our hospital's policies as well.

All right. So we'll move on to page three of the 2911, which includes collecting pertinent medical history. So keep in mind that the questions that we're asking are used to interpret any physical findings, but our patient is not going to know, unless they are maybe a medical professional themselves, what findings or what conditions they have that may interpret their physical findings. So, you want to ask the question in a way that you are able to elicit all of their medical conditions that they may have, and then you, as the SAMFE, can determine whether that's something that might interpret any physical findings.

So medications, the only place that it's asked is on page 13 or 14 of the 2911 and that's, if we're doing a toxicology on a patient. It's still important, I think, to know what medication your patient is on, regardless of whether you're doing toxicology, because that could and potentially affect the interpretation of physical findings. It could be a reason they have easier bruising or they bled more, et cetera. And I encourage you to ask that question.

And then after we've collected a pertinent medical history, we're asking about pertinent, non-assault related history. So this is consensual sexual contact that has occurred in the previous five to seven days before they present to us an unrelated to the assault. So, it's important to be able to explain to the patient why you are asking these questions. And the reasons are, is communication with the crime lab that there's the presence of someone else's DNA on this patient's body. We are going to want to know that. Also, it could be another reason that they have injury. So, we do know that occasionally consensual sexual contact can cause injury. And so we need to be able to document their consensual activities for those reasons as well.

So, for post assault hygiene activity. So, we are going to collect samples regardless of what they tell us as far as their post assault hygiene activity. But again, this is another way to communicate with the crime lab. If they've put some sort of lotion on their hands or other parts of their body, and we're also going to be collecting a sample from those areas, the crime lab needs to know if that particular lotion or ointment or whatever is also maybe potentially going to be present on your swabs. Keep in mind that as much detail as you can give is, is preferred. So, for sure if the answer is yes and then it says in parentheses, if yes, describe, please do so so that we can provide good communication and good documentation.

If the patient has changed clothing since the time of the assault and we can document what they were wearing and then potentially where it is, especially if it's unrestricted, we... In the instructions it does say that the SAMFE can let law enforcement know that the patient's blue jeans are at her house on the floor since they can potentially go and collect those items.

And then moving on to the assault history, which is the bottom third of page three, section F. So we want to clarify the date and the time of the assault. Keep in mind that often they'll say, oh, it happened last night. And then inevitably it was at two or three in the morning. And so the date will change, right? If you think last night was the 12th but it's actually the 13th because it was early in the morning. For location and pertinent physical surroundings we do ask about location, one, for safety planning. If it happened in their home or their barracks and that person lives nearby we want to be able to help plan for their safety. And then the surface that the assault was conducted on. So it was on a bed or up against the wall or on the grass so that we can potentially look for any injury patterns or other debris or vegetation that might be there because of the surface on which it occurred.

When we're asking about physical effects of the assault, as they report that they have tenderness, getting a pain scale. And is it the same as when you first noticed that pain, has it gotten better, stayed the same, has it gotten worse? So that we can completely assess the injury or pain or bleeding that they're having. And keep in mind that that is a threefold question. Injury, pain, and/or bleeding. So if you ask it like that and they say, yes, we need to clarify, is it all three? Is it one? Is it two of those? So just being specific as possible.

For a number of assailants, we do ask this because there is more risk for potential injury. There is more risk for the potential for sexually transmitted infection transmission and/or pregnancy depending upon if they have more than one assailant. And when we're asking about the relationship to the victim, I usually just ask the patient, how do you know this person? And I write down exactly what they say, like we've been dating for a few weeks, or I met him last night at the bar or whatever the patient says. That's what I write down.

All right. So, we're going to move on to the narrative section. So, giving you a little bit of kind of elevator speech, again, as to how you might introduce the narrative section. But inviting them to be able to tell what happened to them in their own words at the time of the assault, queuing them in that you may need to ask additional questions based upon what you hear and to clarify what happened to their bodies. And if they have an understanding that the history that they provide is going to help you guide your exam, ensure that you collect samples from the appropriate places and also looking for any injuries.

And I think it's important when we get to the end of their history to acknowledge that was for most patients a very difficult thing to tell again, to hear out loud and to have detailed questions asked about. We do want to try to quote the patient as much as possible. So letting them know that upfront, "Hey, I'm going to try to write down exactly what you say. So I may need to ask you to pause occasionally. I'm a slow writer, I'm a slow typer, whatnot." We don't want to try to clean up the patient's language. If they're using slang or they're using vernacular, go ahead and write that down and then we can come back and we can clarify what those things mean.

So when we're asking those clarifying questions, I encourage you to use open ended questions first. So, can you tell me what you mean by, or can you help me understand what such and such means? Even if it's something that you already know. If they're using a slang term for a body part and you've heard it a million times, we still need to know that that word means penis or that word means vagina or whatever it may be. Or we need to know that that term means his penis was in my vagina. We need to get them to body part and then body part to body part in order to fully clarify.

Keep in mind, and I said this at the beginning, that when you're asking clarifying questions, we need to make sure that they are relevant to the medical forensic care as a patient. So if it's not going to help in your assessment of their body or to provide the appropriate medical care, then it's not really information that we need to know. Like, it doesn't really matter who paid the bill, right, when you went out to the restaurant or the bar. We can let law enforcement figure that out if that's important. Now if

they volunteer information that doesn't necessarily affect our medical sense of care, please, yes, document that and the best you can, put it in quotes.

Keep in mind that asking the patient why or what happens next is not always very helpful because often as Ms. Ray mentioned with the neurobiology of trauma, or as we'll get into later with drug or alcohol facilitated sexual assault, they may not remember what happens next. And most of the time they do not know why something happens. They don't know why someone did something to them, but they may not even understand why they did certain actions either.

All right. So this is the narrative that our patient Miss JS provided us. So I'll read it here. "We had come back from the bar and went to his room. He was drunk. We started making out and he took off my shirt, but then he wanted to have sex. And I didn't. So I put my shirt back on and told him I was leaving. He begged me to stay and then he got angry. He ran into the door before I could leave and pulled me back into the room and onto the bed and told me he wasn't ready for me to leave. He was on top of me holding me. I squirmed and said, no, but then I don't know. Then I was just scared. And he took off my pants. He put it in and didn't want him to. It hurt and I said, it hurt and scooted up in the bed. He said something. Then he spit on his fingers and he put them in my vagina and he was really rough about it. And then he tried to put it back in, but I rolled on my side. That's when he bit me and rolled me back over. And then he tried again and put it in my butt. He came and then got off and tossed his boxers at me and told me to clean myself up. I got up and got dressed and left."

So this is what our patient told us. So take a moment, maybe press pause again and think about what in the history would you like to clarify with this patient. And when you're ready, we can go to the next slide.

So this is an example of what I might clarify with the patient. When she said he was holding me down, clarified, held down by the upper arms and he was straddling the patient. When he said he put it in, we clarified that what did he put in? He put his penis in my vagina. So where he put it in. Tried to put it back in, clarified that he attempted to put his penis back in her vagina. Rolled on my side. So we want to know what side the patient did and she gestured to her left side. And then again, we clarified about penetration of the anus. And then what does he came mean? Clarified, ejaculated.

You may see other things that you want to clarify. So, this is one of the way that you can do it by putting it in parenthesis and clarified. There are some examiners that will type out the question and then the patient's answer. And of course, if the answer won't make sense without the question you need to put that in there. But there are multiple ways of right in documenting how you're clarifying these different unclear terms or slang terms.

And then we move on to acts described by the patient. And this is another form of clarification. It's also a time... The patient may not have remembered that certain acts were performed or they may have been embarrassed when we were asking about them and so they left them out. So, this is just another chance for us to clarify what happened to the patient's body. Keep in mind that there's terms on this sheet that may need to be clarified. Patients often don't understand what copulation is or suction injury. They often will interchange strangulation and choking. So, I generally ask these questions in a different way, such as, at any time did she put her mouth on your genitals or anus? Or was there any time when anything was around your neck and/or over your mouth? Did you have trouble breathing? So that we can get nice, clear answers.

And then if a answer is yes, attempted or unsure, it does deserve a comment. So please make sure that you do so. You can see on the example to decide in section five B the answer was yes to kissing. She said, when we were making out he was kissing my mouth and face, and after he took my

shirt off, he sucked on my nipples so that you can know what the patient said and potentially collect samples from those areas as well.

If the patient had lapse of consciousness and/or loss of memory, it is important that we help our patients understand that it is okay if those answers are unsure. If the patient insists that something didn't happen, then in a very patient centered way, we can discuss that with them or if they're adamant about their answers, we document their answers.

So after we have conducted a medical and forensic history, then we're going to conduct a comprehensive head to toe assessment. So, the preferred order is least invasive and/or critical evidence collection, such as toxicology be completed first. However, we should always use our clinical judgment and a patient centered response when we are conducting the physical exam in ordering the steps of it.

So let's pause for a moment and talk about injury. So severe physical injury and/or general trauma associated with sexual assault in adults are considered to be a physical. However, if extreme force is used, then we may affect many injuries and they could be profound. So, keep in mind that just because we have an injury on the body that does not necessarily prove assault. And in vice versa of that, the absence of an injury does not prove that there was no assault.

So, based on the research that we have, it's really impossible for us to be able to, if you will, quote, diagnose rape or sexual assault, right? So there was an article by Mark [inaudible 00:37:10] in 2013, that says that based on what we know it's impossible for us as SAMFEs is to draw conclusions about whether anogenital injuries were caused by consensual or non-consensual sex based on the location, number or quality of the injuries. Although some studies have found differences between the two groups in one, or all of these categories, sample sizes have routinely been small and findings not replicated consistently making it imposed to generalize findings to a larger population. Therefore, we as SAMFEs can only testify that findings are consistent with the history the patient provided when applicable, and not that the injuries are from sexual assault. So, please just keep that in mind in your documentation and of course, any testimony that you may provide.

So when force is used, we might see, commonly, lacerations, contusions, bite marks or broken fingernails. And also keep in mind that currently there is no science that allows us to accurately date or age a bruise and this is due to a number of factors, including how old we are, the status of our health, whether we have comorbidities, the amount of blood that might have been released due to trauma, the color of our skin, and then also the physical location of the injury, whether that was over an area that had a lot of fat tissue or of any prominence.

Now I'd like to discuss what the difference is in patterns of injury versus a patterned injury. They sound like very similar terms, but they are different things. So patterns of injury is when you might have a cluster of injuries. Like with strangulation, maybe you notice bruising on the neck and they have petechiae and the conjunctiva. So those two together could be a pattern of injury that indicate strangulation. Or maybe somebody put their hands up to stop somebody from hitting them or coming at them maybe with a knife and they've got injury to their hands that would be called defensive wounds. So those are patterns of injury.

Where a patterned injury is when an injury, which has a distinct pattern that maybe reproduces the characteristic of the object causing the injury. If you think about an iron coming in contact with you, or maybe somebody was hit with a belt, and then you've got the shape of the belt and then the belt buckle where it looks like what caused the injury. So that's a patterned injury.

All right. So, I'd like you to think about how you would document the contusion seen in this photo. So, you can see this is a left forearm, I believe. And there's some contusions there. So think about how you would document these on the 2911. And again, we're just focusing on the contusions.

So there may be some who will document these with something like fingertip bruises. But we want to stay away from that. Even if that's what the patient described saying they were grabbed in this area. We want to describe what we actually see. Maybe you say, four to five oval contusions in a linear pattern over an area measuring two to five centimeters. You can describe their color if they are tender at all. So you want to be very specific in describing the injury and not just saying what it looks like caused the injury.

All right. So when we're documenting, we are documenting on our 2911 and we are using the legend and the diagrams. So, this is an example of how I might have documented the injury that was on the prior page. So we're using diagram A, it's the first finding. So it's A1. I use CT for contusion. And then I proceeded to describe the injury and the pain that the patient felt. So you can use multiple legend descriptors. So you could have used contusion and if it was also red, you could have used ER for erythema, or you could have also documented that abrasion that you saw. So that would be AB for recreation.

If you're collecting samples, her history, so maybe there was nothing there that the patient reported that she was grabbed on her left arm. And so you would still maybe want to collect for potential touch DNA. So that could be SHX, which is sample per history. And you could still collect a sample from that area. When you're describing an injury, you want to make sure that you include the structure, so the part of the body. So even though we're pointing to the left forearm, you still want to say that it's the left forearm. The size of the injury, it's shape, it's color and if tenderness is appropriate to document then document in [inaudible 00:42:37].

And then when we're documenting on anal/genital findings, using a clock face is extremely helpful. And we'll talk about that in a later slide here. So an injury for females, if we're going find injury it's usually on the external genitalia, usually in that three, six, 9:00 position with the labia minora, posterior fourchette behind the, in the fossa navicularis. So, in the next couple of slides there will be some pictures of anal/genital findings. So just providing that disclosure here as we move forward.

When we're talking about our male patients, as far as describing their rates of injury. We don't have a whole lot of research and the sample studies are pretty small. You can see a couple of studies listed here, one being from 2005 where of the males studied, which I think was about 28 or so, 40% of them had anal genital injury and 17% had some sort of external body injury. And in the 2018 Australian studies, a little larger, a little over a hundred men. So 60% of those men who reported anal penetration, there were anal injuries found at 18% of those. And then 58% of the study participants had general body injury.

All right. So let's pause here and think about how you would document this injury. So first, we need to identify what structure we're looking at and we are looking at the hymen. That cotton tip applicator there is lifting up the edge of the hymen to show this injury a little better. It is a laceration. And if we use the clock phase, so 12:00 is going to be up by the clitoral hood and then pointing down toward the perineum. And 6:00, this is going to be around seven or eight. It does appear to have some active bleeding. And I would imagine that the patient is going to report pain. So we would want to document on their pain level. So again, you can see the clock face transposed on diagram G. And then we documented the finding on H, H1, the laceration to the hymen, 7:00, with active bleeding and then the pain scale.

So this picture is the same patient just in different positions. Sometimes examiners may place their patient in different positions to better view an injury like for this one, perhaps they place them in a prone position to allow gravity to allow the structures to be more highlighted so you can see the hymen a little better. If you use this kind of method to better view injury it's just important to note the clock face does not change. So that injury is at 7:00 whether the patient is supine or prone. It's important

though to document what position the patient is in when you're examining them if you're going to be using more than one position to examine that patient.

So they're pointing to injuries. All right. So take a moment to think about how you would document this injury. So I like this photo to make the point that you need to have a systematic method of assessing her injury. So maybe your eye was drawn to the 12:00 injury, that laceration there, or maybe it was drawn that six, 7:00 injury. And maybe you missed one of those because of the obviousness of the other one. So you just want to make sure that you go all the way around from 12 all the way back to 12:00 when you're assessing for injury or findings. So whether you start at 12 or three, it doesn't matter. You just want to make sure that you're systematic in your process.

All right. So after we have gone through the first nine pages of the 2911, page 10, the top of which is documenting about toxicology. So the questions are loss of memory, lapse of consciousness, vomiting, and then voluntary/involuntary ingestion of drugs or alcohol. So the current instructions for toxicology is if they consent and they have filed or they're choosing an unrestricted report, they present within 96 hours and any of the answers to those questions I just mentioned are yes or unsure, it can be appropriate to collect clinical and/or forensic toxicology. Keep in mind that clinical toxicology is for medical decision making, and that is run at your local facility. Whereas forensic toxicology is much more detailed in nature. It is not run at your local facility. It is mailed off to the armed forces medical examiner system in Delaware and assessed there.

And if you are doing toxicology, we need pages 13 and 14, which you can see on the right side of the screen, completed. They're the same form. One of them stays with the original 2911 and the other goes in the toxicology kit and is sent to the lab along with these samples.

So section O is often confusing to many people because it's just a big blank space and people aren't quite sure what to do with it and they've already documented all their findings elsewhere. So some suggestions here, this can be a great catchall area. It can be a place where if for some reason you've had to bury your exam or deviate from your SOP for some reason you can document that there, if there was a delay in care or if they're, going back to like the beginning of our scenario and the patient elected to have her boyfriend say in the room, you can write that there, maybe what you said to the patient. It's also a great place to any education you've provided. If you gave meds during the patient encounter, if you've assessed their suicidal or homicidal disc, maybe you've, in conjunction with the VA, you've come up with a safety plan or you've given them a follow up appointment. This is a great area to utilize for those purposes.

And then page 11 is where we're taking an inventory of all the samples that we have collected. So you want to make sure that every sample that you have collected is represented here on this form. Now, oftentimes we're collecting a sample that there's not a specific description for it. So maybe like if you go back to where that patient had contusions on the left forearm, well, there's not a left forearm sample listed here. So you could potentially put that under other or you can cross one out that you're not collecting and write that there, which is demonstrated there at 3E. I can't quite tell what was crossed out, but it says left upper arm potential touch DNA. So you can do something exactly like that. If there is one that matches like ALS, then please use that. But otherwise you can commandeer another section, just cross it out and put what you have collected.

Keep in mind that the preferred reference sample for our crime lab, [inaudible 00:51:13], is the blood card. So they consider that a more pure reference sample because there's no mixture of any other person's DNA in that. If for some reason you can't get a blood card because maybe the patient declines a blood draw or declines to have their finger stuck we still have to have something to give to the lab to say, this is the patient's DNA. And really the only other option is to do a buccal swab. And so that would be collected after you have collected any internal oral swabs, and then you allow the patient to drink

and swish their mouth. And then you collect just from the inside of the cheek. But again, that is only if there is some reason that you cannot collect the blood card.

Keep in mind that we are collecting perineal and anal swabs together. They're listed separately but they should be two swabs together. And then external genital or vulval swabs are not listed on here. They can utilize 4I, where it says other to document your external genital swabs.

You want to make sure that this form is a complete, and that if you're not using a section that you are lining that area out so it doesn't appear that something was missed.

Page 12 is where we're documenting our photo list. So Commander King, who you will hear in a little bit in the photography lecture, will go over this. So I won't spend too much time, but it is laying account for your photos and you can group like [inaudible 00:52:56] together. Just give an example there, 23 to 25, external genitalia can all be grouped together.

All right. So let's talk about packaging. So all of our samples need to be completely dried prior to packaging. So typically the amount of time that swabs is 60 minutes. So once you've collected your last swab, you can set a timer for 60 minutes and then after that you can start packaging. If for some reason there is something that can't be dry completely. Like maybe the patient's clothing came in wet or something. You need to notify law enforcement of anything that you are not able to completely dry so that they can continue the drying process once they get back to their facility.

We always want to package in paper, never in plastic. Plastic can lead to degradation of the samples and that is not ideal obviously for the patient. We don't want to place a wet tampon in a sealed, plastic cup. The preferred is to let it dry as much as possible and then it can be put into maybe multiple paper envelopes. I highly discourage you from putting in potentially wet tampon inside the kit because if you've ever done one of these exams, hopefully you have, when you've put every thing back inside the kit, you're having to push down on the box to seal it. And then once you do that, and there's a wet tampon in there, for lack of a better word, like ringing out a washcloth and then all of that goes over all the other samples that you've collected. So package it separately in one of those larger paper bags, as you might like an extra piece of clothing.

Keep in mind that restricted kits should not have any identifying information. So the kit, the samples, the integrity of that is your responsibility as a SAMFE. It's not something that can be delegated. It's not something that we can pass off to an assistant or somebody who just wants to be helpful. Especially like a victim advocate or a support person that if they are trying to offer, just please respectfully explain that that is your and your role alone.

So once you've opened that kit, you cannot leave that kit. You can't just run to the bathroom real quick or anything like that. You've got to stay with it.

So when we're documenting, we've already reviewed the 2911 on the written documentation and the body diagrams that we do. They also need to have documentation into their health records. So depending upon where you are, [inaudible 00:55:56] you may be using a [inaudible 00:55:58] or you may have the great fortune of using Genesis. Or maybe you're deployed or your computer is down that day and you're relying on paper medical record. So the exact electronic health record form or program does not really matter in this case. What matters is that they do have an entry into their medical records.

Now, depending upon your role if you are an RN you may be documenting under another provider, like maybe the clearing medical provider for your emergency department and that's fine. They don't necessarily have to have a completely separate entry but they do need to have an entry. So if you think about what your clearing medical provider does for, if you will, a typical patient, the exam is somewhat cursory, right? And they come in, they may listen to their heart and lungs and that may be all

that they do because they're relying on you, as the medical forensic examiner, to do a more thorough exam. And so you need to document that more thorough exam. Nobody's going to know about the laceration on the hymen that we saw back in previous slides if you are the one doing the exam and not documenting on it. So you need to make sure that your findings are documented in the health records.

So keep in mind that the 2911, the medical forensic record, is maintained separately from the patient's medical record and that's to limit disclosure, unrelated information, and for their confidentiality. The medical record should never be submitted with the kit or given over to law enforcement. Much of the medical record is not relevant to prosecution and potentially infringes on our patient's privacy. So all or part of the medical record can be subpoenaed if the patient doesn't give consent to its release. But it's ultimately up to the court to decide whether that information is pertinent to the case. And all site facilities should have clear policies about who is allowed access to the medical forensic record and if, and how they are stored. So currently I encourage you to please refer to your service specific policy for further guidance on storing or the keeping of medical forensic records.

So, there is a difference between medical and forensic documentation. So you can see the definition here on the screen about medical documentation that is defined by the joint commission as containing sufficient information to identify the patient, support our diagnosis and justify the treatment course that we're prescribing. How will the patient be doing with that treatment, the results, and then promote continuity of care among healthcare providers. And then forensic documentation is the creation of permanent records of an event or state that are of sufficient credibility to serve as evidence should it so be needed in court.

And this table here is just to delineate what goes on a 2911 and what goes in the medical records. So, if you go all the way back towards the beginning of when I started speaking, you can remember that we're collecting information about past medical history items if they are needed to interpret the exam. So if they're not needed to interpret the exam, don't necessarily belong in the 2911, but they're absolutely is a place for them in the medical records.

And in turn details of the forensic exam, maybe where you took a swab or whatnot, not necessarily needed to be included in the medical record unless it's needed for the continued treatment of the patient.

So, for a 2911 documentation, as with any documentation, we want to make sure that it's complete and that it's thorough. It's a 14 page document. So we want to make sure that any blanks that we are either filling them in or we are crossing them out to ensure it doesn't look like we just skipped over areas. We want to make sure that there's consistency throughout, that you are written and your diagrammatic documentation match, that our dates and times are accurate, that we're using language that is considered neutral that doesn't show bias or place blame. As with all medical documentation it is approved medical abbreviations and want to make sure we're utilizing that. And then I've already discussed using the 2911 legend as well.

So this 14 page document has a lot of information it's really important that someone else look at your 2911 as well and it's given a systematic review. So these systematic reviews, these peer reviews can serve to increase our overall effectiveness of our programs. They can assure the reports are complete so that we follow policy. It also allows program managers to assess staffing needs. If there's educational needs, maybe they're identifying some problems with maybe how the patients checked in at the ED desk or whatnot, or lack of information on the provider's part may be prescribing medication. So it helps identify those potential problems and then hopefully come up with a solution.

So keep in mind that the words we use matter. So you can see here in the thought bubble, maybe there's some words here that maybe you've used before or maybe you've heard used. And

considering maybe how appropriate are these words, which words have legal implications versus which words may be provider preference. So on the 2911, when we get to the physical exam, we are asked to describe the patient's general physical appearance and also their demeanor. And we want to keep in mind that we were asked to describe those things that we are writing down what we can see with our eyes. We are not making conclusions about the patient.

So, if you would normally say the patient is anxious, well, what is it about that patient that makes you think that they're anxious? Are they ringing their hands and refusing to make eye contact? If that's the case, then write that down because anxiety or saying the patient's anxious is drawing a conclusion. Maybe there's another reason they're ringing their hands or not making eye contact. So write down exactly what you see.

And then considering some of these other terms. So alleged, hopefully we're not calling our patients alleged victims or alleged sexual assault. We don't say that about a patient who presents with chest pain. They don't have alleged chest, they just have chest pain, right? So a patient may call strangulation, choking, but hopefully we, as examiners, are using the correct terminology when we're documenting. Also keep in mind that asking or saying, did you have sex with, or whatnot? That sounds consensual in nature. And so you want to use body part to body part. And then I'll allow you to think about maybe why some of these other words that are in the thought bubble there may not be the most appropriate words to use,

All right? So hopefully we've said ad nauseam that the 2911 is required for every safe and primary intention is to document forensic findings and that we're using the electronic health record or paper medical record if one is not available to document any additional medical exams, and then also a complete documentation of your physical findings and treatments, labs and prescriptions provided.

So, this is just an example medical record template that you could potentially use. Keep in mind I'm not saying that the SAMFE has to necessarily document all of this. It may be a collaborative effort with whoever the clearing provider is, but it is an example of what you can use to ensure that you have a complete entry into the medical record and that anybody providing follow up care is able to see exactly what was provided to the patient and any injuries and whatnot that they had on their body.

So just a little bit older screenshot of [inaudible 01:05:02] order set. Highly recommend that if you don't have an order set at your facility, that you create one. Get with your IT folks, get with your director of medical services or ED department head. Having standing orders like this greatly cuts down on provider confusion, forgetting to order things, and then therefore our patient leaving without the appropriate care because maybe we forgot to offer HIV [inaudible 01:05:32] or we forgot to offer emergency contraception.

The discharge planning is very important. So, we need to consider the patient's mental health concerns and also their medical concerns as they'll make sure that they're all at least addressed before we are sending these patients home. Addressing their physical comforts. Hopefully either your program or maybe your victim advocates that respond have some sort of replacement clothing. If we're taking their underwear or their shirts, that they have something clean to go home in. If you're fortunate enough to have a place for your patient to shower, maybe a private bathroom attached to your exam room, that's wonderful. And then assisting with the safety planning. So, this largely falls under the purview of the victim advocate to make sure that that's taking place, making sure that they know where they're going after they're being discharged. Is it safe? Do they have adequate support as well in that location?

And then assisting with any follow ups that may be needed? So, they may need forensic follow up. Maybe there's a finding that needs monitoring over time, or maybe you notice something that's

nonspecific, like maybe there's some redness to the cervix and you're not sure if that's an acute injury or maybe even a normal variant. So it may be appropriate to bring that patient back in a couple of days to further examine those areas. And then of course, appointments are going to be needed to address ongoing medical concerns. So if you're not able to make that appointment for them, make sure they're scheduled before they leave, we at least need to provide written information to the patient about who to call, what the clinic's name is, to make sure they understand that if they're not following up with a specific sexual assault follow provider that they know that they don't necessarily have to disclose all the details of their assault to receive medical care.

You can also talk with the patient about whether they'd like a healthcare provider to provide a follow up phone call. And if so, the best method and time for this contact to ensure that we protect their privacy and safety. And the main purposes of such a call are to check on their medical status, remind them about the necessity of follow up testing and care. An optimal time for this phone call is 24 to 48 hours following their discharge. We want to make sure that whoever's making those phone calls, that they're really familiar with the case, they're aware of any confidentiality issues and the potential or anticipated medical needs a patient.

And we always want to make sure that, we are giving them a lot of information, talking a lot to them that we have written this information down. Okay. So even patients, like if you see patients in the family practice clinic or the ER, they can't remember what you told them to do for their sprained ankle and that's the only issue that they maybe came in for. So I think it's very unrealistic to expect our patients who have been affected by sexual assault, by trauma, potentially alcohol or drug facilitated as well to remember everything that we say. So providing it in writing is key.

These are the codes, the ICD 10 codes, that can be used to document these encounters. You may not be coding the note. That may fall under the clearing provider but it can be helpful to have these at your ready in case there's ever a question about which codes are needed.

And that is where I end. So, I will return later and I'm going to leave you now to the medical forensic photography and alternate light source.

Lieutenant Commander Mary King:

Hello everyone. I'm Lieutenant Commander Mary King, as was previously introduced. I'm dean of courses Atlantic KMP program manager and program-

LCDR Mary King:

... had asked, I think when you were offline, if there's any reason we need to take a break or if we can just forge through because I know it's noon.

Speaker 2:

No. We can keep going. That's fine.

LCDR Mary King:

Okay. Sounds good. Then I am ready to start.

Greetings, everyone. This is Lieutenant Commander Mary King. As I was previously introduced, I am the Medical Forces, Atlantic [inaudible 00:00:24] Program Manager and Trainer, and I'm glad to be here with you all discussing medical forensic photography and alternate light source.

This is a refresher course; nothing on this slide is surprising. As you may recall, there are a few reasons to obtain forensic photography. It's used to supplement the patient history and written documentation of physical injuries that are identified. While written documentation is the gold standard, if a patient consents to photography, according to [Ernest 00:00:54] et al., the absence of photographic evidence that has usefulness may undermine the written documentation by the examiner and call into question the accuracy and credibility of the written record, which none of us would want.

Another reason is to minimize secondary victimization by providing an objective clinical record that other examiners can review. This is independent review and it's not only helpful for peer review and training purposes, but it also affords the opportunity to assess inter-rater reliability without subjecting the patient to another examination by a different provider.

Since we know physical injuries will heal over time, another purpose of forensics photo documentation is to capture the acute clinical presentation. This creates a vivid representation of the injuries identified upon examination. As quoted in the National Protocol, "A good photograph is tantamount to stopping the clock." Additionally, a photo may be used to create a baseline for comparison to findings observed during follow-up visits, like with serial strangulation photos or with ongoing intimate partner violence, elder abuse, or child abuse, which as the forensic healthcare program expands, we may see more of those examinations in the future as well.

As I mentioned, the photos can be used for peer review and training purposes. During the consent process, patients may be consented to allow for the de-identified information, which includes forensic photography to be used for, quote, valid educational or scientific interests and/or epidemiological studies. As a reminder, it's recommended that all exam write-ups be peer reviewed shortly after being created and prior to disposition to law enforcement, if possible. In the future, this likely will make its way into policy recommendations. Right now, it's something we just recommend. It's not in the policy at the moment.

When going through the consent process, we must be prepared to discuss the purpose and use of forensic photography. So number one on most individual's mind is privacy. We need to be able to answer the question who will have access and how are they secured or how are these images secured. In the age where data leaks both intentional and unintentional are so widespread, it is challenging to guarantee patient privacy. Many jurisdictions place few limitations on who has access to sensitive photographs during trial preparation.

Currently, as far as the services are concerned, when we collect the images, this can sometimes vary by service affiliation and facility as how to how those images are stored or dispositioned to law

enforcement. For example, in unrestricted cases, all branches provide the military criminal information officer or [MCIO 00:03:20] with the photo documentation. However, some services may also keep a copy of those images in the patient administration department, also known as PAD, while others do not, and for those that do not, MCIO is the only one that receives a copy of the images and that's the only copy, so if that gets lost, there are no other copies.

Then in researching cases, again, there's some variations. Some services maintain that copy in the PAD department while others only have that copy, whether it's on an SD card or CD, whatever it is, that goes with the SAFE kit and is maintained with SAFE kit. This is another one that DHA is working on or has a working group to develop this procedural manual to provide a little bit more guidance and increased standardizing regardless of service affiliation.

Next, we need to clearly communicate that any photo obtained may not be deleted or destroyed. So we reconfirm that consent throughout and we want to make it clear that once they've given us consent, we are obtaining that image, and it's remaining on this photo log. We also need to keep in mind that the process of having one's body and possibly their genitalia photographed may leave a person feeling re-traumatized. Clinicians need to be cognizant of both the verbal and nonverbal cues when discussing and employing photographs or photography during the medical forensic exam.

With regards to trauma-informed care for photography, it may sound like, "I've seen injury to this particular area or body parts. Is it okay to photograph it?" Notice I didn't them, "I'd like to," or, "I recommend," or, "I need to take a photo." I simply state the fact of what I see and I've reconfirmed consent without inadvertently pressuring them to agree. In this unfolding case study, our patient agrees to all photographs is indicated.

This slide is another visual reminder of the sequence of events from consent through photograph disposition. A slide like this may be helpful to print out to have readily available in the middle of the night when you're called to do an exam and it's been a while since you've had one to do. This will help quickly orient and remind you of the process. None of us want things to be out of sequence and I'd hate to be doing an exam in which I realize I've taken photos of the member's hand, but forgot to first obtain a bookend or presentation photo, or I come to dental photo only to realize I need a tripod stand to adequately capture the image.

For example, here we start off with consent and underneath it with the sub arrows that we have there, I need to remember that my consent is signed, and I'm reconfirming throughout the exam that the patient is comfortable with the pictures. My equipment, is it available, is it functional, because I don't want to do that once the patient's in the room. Then, when I'm actually taking my pictures, these are the sequence of the pictures. I need my bookends where first and last have the same patient information on it. Then the presentation of the individual, which could either be a portrait image or a full body picture. Then when I'm taking a picture of an injury, I need to create the context and I need to do this every time; the rule of threes.

Then, after I've captured all my images, I need to document all of them and when I document them, I could group them as well, and then to secure the images with the disposition. The delete there is not that I'm deleting images, like if I took a picture of the floor or one is blurry because that would not be appropriate and it's not recommended. But if I have an SD card that we're reusing, it's the process to delete and reformat it. This, again, is just a reminder and a visual reminder that your team could use.

When we're checking the equipment, it's the examiner's responsibility to be familiar with the equipment they're using. If your facility has damaged or missing equipment, we need to educate ourselves in order to make recommendations to purchase the correct equipment. Sometimes we have not because we ask not. Then, if we're thinking about equipment considerations, here's a basic list of

recommended items. One on there is obviously a camera and the particular type of camera is a digital single lens reflex, and that's because it has the best picture quality and is most widely recommended in the literature, as it has a changeable lens system.

Obviously, we never use a personal phone or a smartphone. Only use a command designated piece of equipment. The DSLR should have the macro lens function on it. This allows for adjusting the focal length and distance. A standard 50 millimeter prime lens and standard zooms are the most suitable for everyday clinical use, according to [Chaver 00:07:28], 2019. Another reason smartphones or tablets or tablet cameras are not recommended is due to them often having unknown focal lengths that can result in unrecognized, lens distortions, according to Anderson 2017, and this would make for our portfolio quality. When we obtain photos, we want them to be useful and of a good quality.

Next on list, we have lighting considerations. Dark rooms result in less light striking the camera sensor, which make for darker grainier images. Ways to increase lighting can include different various room lightings, built in camera flash or an external ring flash or a flash gun attached to the camera, or even light reflectors. Light reflectors are likely not suitable for clinical examination, but a flash gun, also known as a speed light flash, that's made to attach to the camera and automatically fire when a picture is reasonable to have. Another thing to consider is the room lighting. If it's not adequate, you could consider walking through it with facilities to see what changes could be done to the room to increase the lighting. Furthermore, the national protocol states a good quality macro lens with a ring strobe flash offers the best quality and most flexibility for forensic photography involving sexual assault.

Next on the list we have for equipment considerations is a tripod. This helps mitigate camera shake and camera shake is a term used to define the act of accidentally shaking a camera during shooting, due to unsteady hands, that could result in blurry images. This generally occurs more often if you're shooting on a low shutter speed with a heavy lens and can be avoided by using a tripod and capable release system or setup.

Next on there, we have a neutral background and we want to ensure the background is free of distractions, such as mergers, which are considered lines or objects that appear to be emanating from the subject's body. Neutral background colors include white, blue, or gray, and should not reflect excessive light. For example, high gloss paint reflects more light than flat or eggshell paint, and so that would be something we're considering when you were painting a room.

Next, we have a measuring scale, which in this case it should be a rigid scale that has a [matted 00:09:39] finish to reduce reflections. Most commonly used would be the ABFO number two scale. It's recommended to avoid tape or adhesive scales as they may warp with the contour of the body and will not provide an accurate presentation for further analysis. The ABFO number two scale has circles and cross hairs that you'll see here that are printed on it, and they enable the [plane or 00:10:00] orientation of the scale to be easily checked by ensuring that the vertical and horizontal lines obtained within the circles are of equal length. It provides an indication if there are any size dimension or distortions that are present, so that's important when we're capturing those images that those circles be present as well, if we're using that type of scale.

Next on the list, we have a color chart. It's used to ensure accurate color reproduction and inter [rater 00:10:25] reliability. A color chart does not indicate the severity of a bruise. If used, the color chart must be included in the kit, otherwise it's not useful as there would be no comparisons for ensuring accurate color reproduction for independent review.

The last thing I listed on there is the storage medium, and that has to do with your SD card or your CD or DVD, whatever medium you're using to store the images. Some of those devices allow for password protection and this is a great function or option it's available because it affords another in

maintaining that patient privacy. Obviously, we're not going to write the password on the outside of the device. If we are using it, we would write the password to the device in the [2911 00:11:08]. The individual who has the 2911 should have a need to know and have access to that information, and then they should also have access to the photo log as well.

Those are just some of the considerations when you're looking at your equipment, making sure you have what you need in order to conduct the forensic exam and specifically the forensic photo documentation as well.

So this picture from the DB 2911 instructions, it demonstrates the importance of why the camera lens must be at a 90 degree angle or perpendicular to the surface being photographed. If that doesn't happen, the image is distorted in regards to clearly and accurately representing the injury or finding. According to Evans et al., if a wound or feature of the body is photographed it more at more than a 15 degree angle to the perpendicular, then distortion would be visible within the image. The angle should not change from one photo to the next. So this picture here is an example of that distortion, and we'll discuss it again on the next slide as well. Additionally, the area of interest should be positioned as centrally as possible within the frame. Centralizing the injury may not be possible on the initial orientation photo, but definitely needs to be on the mid to up close images.

Another consideration is depth of field, which refers to the distance between the closest and the farthest objects in the photos that appear sharp. I'll have an example of that a little bit later, but cameras can only focus sharply at one point. Ideally the patient should be positioned approximately two to three feet from the background to help reduce shadowing and an appropriate depth of field used to ensure the background is not sharp. This is another reason why we should have a neutral background, as it will eliminate other items for the lens to focus on. It's also another reason why we should be familiar with our equipment prior to using it so that I know the proper settings for it. We'll go on to discuss some of the distortions that I have listed here, and those are based on sometimes the camera position, like the angular distortion seen here, and others are based on the incorrect use of adjunct tools, as we'll see.

I just want to point out that many of today's images like the ones on this side are from the Photo in Custody [and parks 00:13:16] PICS Working Group in Europe. They've developed an excellent resource and I highly recommend you get a copy to read and keep on hand for quick reference. What you see here with the images on the left is an example of angular distortion like we had on the previous slide. As I mentioned, each injury must be taken with a camera plane or the lens of the camera at 90 degrees to the skin to reduce this type of distortion.

As you see in the first image, it's perpendicular to the hand, while the second image is in at an acute angle and causes an angular distortion. The image is on the right hand side, you'll notice, they deal with that magnification distortion, type two, and that also deals with that depth of focus that I was talking about. Magnification distortion is not related to the camera position so much as it's related to the distance between the camera lens and the scale. If the scale is too close to the camera, as you see on the one on the far right, then the body and the injury will appear smaller than they actually are. The scale should be as flush to the skin as possible, but should not distort the skin. When we're remembering the OPST process in our examination, it would be appropriate to obtain that first orientation photo, then swab the area, so gel may be placed next to the area without causing cross-contamination.

Distortion types three and four are solely related to distortions introduced into the image by improper scale use and occur when the scale is tilted or too much pressure is applied to the scale, causing it to warp. As you see here on the left, the examiner is pinching the bottom [L 00:14:50] part causing the ruler to bend, therefore a correct measurement cannot be taken on the horizontal flame. The image on the right, this may be harder to discern, but the top portion of the L is tilted closer to the

body, whereas the bottom L portion is further from the skin, again, causing an inaccurate representation of the measurement then.

We've discussed consent, equipment considerations, and camera position concerns. Now we'll go on to discuss some recommended photos in the sequence. As previously stated, the first image needs to be a bookend that contains patient information. The next recommended set is that of the patient upon presentation, which can either be a headshot or a portrait shot or a closed full-body shot. This practice strengthens the audit trail and links the injury that's belonging to a specific patient to the one identified in that photo or initial shot there. If the patient is wearing the clothing from the assault, a closed body photo is recommended.

Here, we also see an example of overlapping photos, as mentioned, that you might need to take for the orientation photo. That's really if your space is limited and you don't have the ability to step back to get the full image. You see that each picture captures some overlap. If you were to lay them one on top of another, you can recreate that initial presentation.

Usually at this point, I would like you to just sit and think for a minute. If this is a photograph that you're coming across, think about, "Hmm, what do I think this is trying to capture here?" This is stressing the importance of our orientation photos and our rule of three, because if this is the only image that I have, I might be considering maybe this is a cleavage shot, a buttocks shot. I don't really know and I can't orientate myself very well as to where on the body this is being imaged.

When we go to the next photo, I step back, and now I have a clear understanding. Again, when we're thinking about centralizing the area or the injury within the photo, I don't see an injury here, but this is highlighting how we need to create that context, that orientation, so that if there were an injury there near the armpit area, that I have a good understanding of where it's being photographed.

Next, after we have that orientation photo, because it helps, again, paint the context of where this injury is located on the person we have that mid-range, and oftentimes examiners will have the ruler or the measuring tool used in this frame because you're able to capture all of the circles if you're using the ABFO ruler and you're not obscuring anything around the injury, as well. Some of these are not necessarily very good pictures that I have, in the sense, like the one in the bottom left would be an example of that magnification distortion, because that L ruler seems to be close to the camera lens and not close to the individual themselves. And again, OPST process would be swabbing before we lay this next to the patient's skin. But that mid-range image can be captured with the macro function where we could zoom in a little bit as well, so we don't have to invade the patient's space, but it's now getting a little bit closer to that area of interest that we identified an injury where we want to take a picture of it.

Then, next, we have the up close. Again, you can use the macro function to further zoom in and then we can go ahead and capture that injury in full detail. We've created the context to understand where it's at, its location, its dimensions, and now we can get a more up-close view of that image.

This slide, again, a lot of these pictures are taken from that PICS Working Group I was talking about earlier. These are some great considerations that they had there. So we see on the top, we have some rulers and there's an L ruler that has a straight ruler that has been affixed to the bottom corner. This helps eliminate, when you're holding the ruler next to an area to be photographed, that you don't have the examiner's fingers in the image or in the photo. That can be slightly distracting. Instead, we can have the handle that's been created and then we no longer have the examiner's fingers in the image, so that's the one consideration.

Another consideration is the relationship of the injury to the ruler. So a lot of injuries will already have like a natural horizontal or vertical access, and so we would want to make sure we're lining that up appropriately with the ruler, whereas we see in the bottom left here, the L ruler's put at a V as

opposed to along the natural horizontal and vertical planes of the injury. We want to make sure we're orienting it appropriately.

The scales should not occlude the injury to avoid injury cutoff. It's important that local anatomical landmarks should also be respected. If occluded, the orientation interpretation of the injuries may be more difficult. So the scales should be disinfected with antiseptic after each use, unless they're disposable and they're not being reused. So a couple of things here is create a handle if you can, think about the orientation that you're using your rule for in relationship to the injury, and then also that we're not obscuring the injury at all.

This is just a great reminder of the overview of the rule of threes here. We've got the orientation, we have a mid-range, and then we have an up-close and here they choose to do the up-close with the ruler at that point. But we can see how, if all I had was that up-close injury, I wouldn't know necessarily where that is on the body in relationship to the body without this rule of threes, and having the set of three images here.

This is an example of a rule of three on a curved surface. If you have a ligature mark, or here, there are two puncture wounds that are on the side of the finger, you would get the perpendicular at that dorsal aspect or the aerial view that we have coming down. Then we came down to a lateral aspect to go ahead and get that perpendicular image there as well. If you have something, maybe there is a ligature mark or there's a cord wrap around an arm or something like that, so it goes around the entire circumference of the area, well, you would need to have it on all four planes, the anterior, posterior, and lateral aspects so that you can adequately capture that injury that you're trying to identify. You wouldn't be able to change the angles, remember, but you would want to go ahead and check it out at each of those planes.

This is another consideration. If somebody comes in and they have some injuries and there's some dried blood there or something along those lines, and those injuries are minor and you can delay cleaning them until evidence swabs can be taken and until they can be photographed, that would be great, if the ed team can go ahead and do that. That might not always be the case, because limb injuries obviously take precedence, but in a situation like these two images here, that would be a possibility. You have the line of how it presented upon coming into the facility, they then got their evidence swabs, they cleaned the area up, and then they go ahead and initiate that rule of threes in getting the context.

You can also see in that one, how the injury is off to the side is not really central in the picture. Again, we would want more central in the picture if we could, because at first, all see is nothing here until our eyes are drawn up to the left. And then, with the images on the right hand side, another great example of getting that before and after, because a relatively small amount of blood can look pretty drastic until we clean it up, we get our evidentiary swabs, and then we can see underneath. Maybe there are just some minor cuts and bruises or whatever that are there, but we weren't able to see that before. However, if all we had was this cleaned up shot, if you will, we wouldn't get an appreciation for how the patient looked upon presenting to our facility.

Okay. I want you to take a moment and think about these pictures and reflect. Typically, at this point when we have an interactive class, I have you type into the chat box what is your feedback if these were your pictures or a member of your team. Let's say these were the only images that were captured of these two particular areas. One, right off the bat, they're not of the same person and they're not of the same area, but typically what people identify from these images is that the one on the left is dark and grainy, so it's not clear. That happens. I take a picture; I want to review each of my pictures to make sure that I get the image that I want. If not, I need to retake it, because if this is the only image I have while I'm not doing a good service to it and the photo quality is poor and the usefulness of this image is not very useful at all.

The one on the right hand side, the coloring is a little bit better. I've got better lighting. I'm not really clear of where we're located. It might the left lateral neck. I'm not sure. Maybe it's an armpit. Maybe it's a crook of a leg somewhere. I'm not exactly sure where this is at. So my orientation photo could be better. I'm also not sure of what exactly we want to a photograph here, because it looks like maybe there's a ligature mark or superficial abrasion. There's a contusion there on both sides, actually, so it's unclear what we're trying to capture. Again, if that's the only one, we could do better; if it's one in the list of them then it's okay.

The next set we have here are another example for you to sit and think through, again, if these are your photos or a member of your team and you're doing peer review, what type of feedback would you provide that individual? Look at this and think about that for a second. A couple of things I see here would be, the one on the left, there's a very distracting fish painted on the wall. The patient is even pointing to it while they're also lifting up their pant leg as well. So am I supposed to look at their pant leg or am I supposed to look at the fish? Very distracting.

The one on the right hand side, as far as orientation, it appears to be a lower extremity, because that is a cord from the wall, from an outlet, which is likely low to the ground, and that looks like an examination table, which would be the drawers below the table. This is likely a lower extremity, but I'm not exactly sure, and my background is distracting.

A personal story here: one of the first exams I did, I ...

A personal experience here: on one of the first exams I did, I was so focused on capturing the images of the injuries to my patient's back, that I didn't pay attention to my background, and for Navy programs, we utilized safety assistants. So I had a safety assistant and with the layout of the room and where we had put our specimens, I had captured my assistant behind my patient. They were in the background. You couldn't see that individual's face or anything, but I was absolutely mortified upon reviewing it and looking at it with my program manager that I failed to notice there was another individual in the frame, which is obviously is not helpful or ideal at all. So we really want to be cognizant of what's in the background and make sure it's not distracting from the purpose and the intent of the image.

Again, this is another one for peer reviews. Sit and think what type of feedback would you have? Do you notice any type of distortions there? If so, what are those distortions? So with the one on the left hand side, some of the distracting things would be the background. We have the individual's legs and feet and floor that we're seeing. A table would've been better, maybe a [inaudible 00:25:51] and we chuck that on it. Then, we have one hand and part of another hand; it would be better to go ahead and capture both the hands clearly and then begin to go in closer for our mid-range and up-close, because it looks like the intent of this image is to capture that there's some nail damage to the middle and pinky finger there, and we would want to capture that appropriately.

The image on the right hand side appears to be stretched and distorted. It also looks to be taken in an acute angle, so that looks like there's some angular distortion. Again, that would be important to have the proper aspect of this individual's hands. Is there maybe some defensive wounds that we are seeing here? We would also consider getting up close of underneath maybe the fingernails as well. But these pictures, again, if they were the only pictures in the photo log for the hands, that would not be ideal and they wouldn't be as useful, so we will want to mark that type of feedback.

We mentioned previously about documentation is very important. On this page of the 2911, we're going to go ahead and document what type of camera we use and that doesn't say it up there. It just has the format camera type, but we would recommend that you document the camera type. Here,

with an example of a [Luma 00:26:58] cam, but if you have a Cortex Flow or a Nikon or a Canon, whatever it is you have, it's recommended you go ahead and note it there.

Then it also asks for the disposition of the photos. Well, here is an example. You could do one disk or SD card, whatever your platform is, but however many copies of that that you have, and it was either dispositioned to the SAFE kit, maybe, if your policy is to store it into the kit or maybe you turned it directly over to MCIO. So note that there. A thing you could do further would be also to write, "One disc with 42 images, dispositioned with SAFE kit," for example.

Then we have our images here and notice that, again, that they're all grouped; you don't have to rehash the information that you've written on the body diagram. I've seen that before on other documents where examiners wanted to be really thorough, so they have what they documented on the body diagram, they wrote down, and then they rewrote that same stuff in their photo documentation. It's not necessary and it provides an opportunity, double documentation, for us to inadvertently write something that differs from we wrote on the body diagram. So just simply write, "Pictures one and 10 are bookend photos; two through three are portrait photos; four through five are hand photos," whatever it might be and then they can go back and look at the body diagram as well, but you have that quick reference of which photos are grouped together.

This is another slide that's great to print out and just have available. At another program, the program manager had created this, printed it out, and just had it available as part of our paperwork to remind us of our process because, again, this is at high risk, low volume that occurs in some areas, as far as patients coming in, that is, and how many examinations we may be doing. Maybe last time we did an exam, because again, this is a refresher course, was at our initial training or was a year ago or some time could have passed. This is slightly different than our usual examination process. When we see patients, we're not usually so hyper focused on attaining swabs before I touch or palpate my patient as I'm examining them, so really having this in front of us is a great reminder.

Just to go through what the icons are, the first one's reminding me, I'm observing. The next one, I've observed any injuries. I'm going to go ahead and take photographs as indicated. And then we have a little swab there and the [toluidine 00:29:11] blue dye. After I photograph, I can go ahead and swab the area, and then if I'm at the general examination, I can go ahead once I swab the area, I can apply the toluidine blue dye. If I've applied the toluidine blue dye, I need to let that set for at least 60 seconds. So I have an alarm there to remind me that I need to let it set. After that 60 seconds, I go ahead and remove it with my with my water, and then once I've removed it, I need to examine again and then take photos as indicated. So it's helpful, especially when you're getting to the general examination, but in general it helps as well just to remember slow down, OPST for every part that I'm assessing.

Now we're going to transition into ALS portion. As you'll recall in the national protocol, it specifically recommends using an alternate light source to assist in identifying evidence to quote aid in examining patients' bodies, hair and clothing, scan for evidence such as dried or moist secretions, fluorescent fibers not visible in ambient light, and subtle injury. So the protocol recognizes that while the exam can be done without a light source, it is a relatively inexpensive piece of equipment that it is commonly used during exams.

When we're talking about alternate light source or ALS, we're referring to the Forensic Technology Institute Center of Excellence and they define it as a tool used to help visualize evidence that is not apparent to the naked eye. Alternate light sources typically utilize the UV and visible light spectrum and when used during a SAFE exam, ALS could also be referred to as forensic light source, or FLS, but we are only going to use the term ALS during today.

In 2018, the National Institute of Justice published a landscape study of alternate light sources by the Forensic Technology Center of Excellence program and the table pictured here is an excerpt from the publication, showing a comparison of current products on the market as of 2018, and there are more listed in the publication. If your facility does not have an ALS device or needs to upgrade, I recommend reviewing the publication prior to making a purchase.

To help us understand the science behind ALS use, we need to review the electromagnetic spectrum. The electromagnetic rooms is a continuous range of frequencies or wavelengths of electromagnetic radiation. The spectrum ranges from long wavelength, low frequency radio waves, to short wavelength, high frequency gamma rays. In the spectrum, it's traditionally divided into radio waves, microwaves, infrared radiation, visible light, ultraviolet rays, x-rays, and gamma rays. The divisions between these types of rays are invented. They're not actually physically separated. It's on the spectrum.

Again, invisible light, as you see, also known as white light, is in the region of the spectrum in which our eyes interpret those frequencies or wavelengths as colors. What happens is that certain frequencies and wavelengths stimulate the rods and cones in the eye, which in turn sends a signal to the brain. Each color is associated with specific wavelengths. Mixed wavelengths produce more complex color sensations. As you can see in this illustration, like I said, it's a very small segment of the spectrum. When defining the unit of measure, they're commonly referred to as nanometers. So using this unit, the visible portion of the electromagnetic spectrum is located between 380 nanometers to 750 nanometers. As noted, one can see that [inaudible 00:32:41] is expressed in the spectrum with red being at 670 to 770 nanometers and orange at 592 to 620, and there can be some overlap because this is a range and it's not clearly demarcated as far as going from one to the next color.

One more consideration is the energy of the electromagnetic radiation. The energy of light is proportional to its frequency, meaning as the frequency of light increases, so does the energy of the light. So for example, red light, which has the longest wavelength in the visible region also has the lowest energy. As wavelengths contract towards the blue light, the blue end of the visible region of the electromagnetic spectrum, the frequencies and energies of colors steadily increase. On the next slide, we'll discuss why this is important.

As we'll recall, blue light to violet light has shorter weight lengths in the 400 to 500 nanometer range with higher frequencies of energy. There are natural sources that emit blue light like the sun. There are also artificial light sources, such as LEDs, computers and smartphones. Some types of blue light can be beneficial. According to [Dow 00:33:51] et al. in 2018, research has shown that myopia, also known as nearsightedness, can rapidly be reversed to hyperopia after blue light irradiation, which may explain why blue light can affect refractive development and reverse myopia. Blue light also stimulates the secretion of melatonin in the penial gland, which can increase or decrease cortisol expression, depending on the time of day and regulator body's internal biological clock. If exposed to blue light during appropriate [wake hours 00:34:20], it can help regulate the circadian rhythm.

However, chronic exposure to high energy, short wavelengths of blue light between the 415 nanometer and the 455 nanometer range are the most harmful to the eyes. Blue light can penetrate through lenses to the retina and cause retinal photochemical damage that causes dry eyes, cataracts, age related macular degeneration, which is the deterioration of the part of the retina responsible for [sharp and central 00:34:46] vision. But blue light has also been shown to trigger inflammation of the corneal epithelial cells.

So blue light, if excessive, especially at night when melatonin production peaks, it can not only damage the retina through the ocular surface, but it can also stimulate the brain, and as previously said, it can inhibit melatonin secretion, so an increased corticosteroid production, thereby destroying

hormonal secretion and directly affecting sleep quality. So it could either be a good thing or a negative thing, depending on the time of the day in which we're exposed to a blue light. The point of discussing the effects of blue light on the eyes is to highlight the safety aspect to wearing goggles with ALS use, by both the examiner and the patient. There are other reasons you use eye protection, as far as facilitating interpretation of the ALS, but here we want to highlight the need for eye protection, because, again, all of this is not felt; it is painless damage to the eyes that's occurring.

Now just above and below the visible light spectrum, we find ultraviolet and infrared radiation. You'll recall that neither ultraviolet or infrared radiation are in the visible light spectrum. Ultraviolet light has shorter wavelengths around approximately 380 nanometers, which means higher energy, that results in shallow skin penetration, less than a millimeter. You can see that here on the illustration.

A Wood's lamp emits a black light, which is invisible to the naked eye because it is an ultraviolet spectrum. The lamp glows in dark environments because it also emits some light in the violet region of the electromagnetic spectrum. A Wood's lamp is covered with a filter and emits wavelengths in the 320 to 450 nanometer range, which will be important as we look at the range in which most items for us and the type of wavelength light that we would want to have on hand, if we're using any ALS light source.

Some examiners use a technical or a technique called reflective UV imaging. A examiner uses a special UV sensitive camera to capture UV that reflects often object. In my reviews, reflected UV imaging does not appear to be used by scenes or [scenes aides 00:36:48], but rather for forensic examiners at a crime scene or in the laboratory, so that's beyond the scope of this presentation.

As you see in the industries in the infrared, radiation is a broad range of longer wavelengths, approximately 650 nanometers with less energy that penetrates the skin more deeply between the four and five millimeters area, which makes it more likely to capture severe bruises and incisions, such as deep bite marks or knife or gunshot wounds. Again, the reflective UV imaging is something that's beyond the scope here, but it's important to be aware of.

Just like exposure to blue light can cause harm, exposure to ultraviolet rays can cause harm, as well. Probably the most well known is sunburn. However, the lens in the cornea absorbs UV radiation as well, so high cumulative exposure to UV radiation can cause corneal damage, cataracts, or photokeratitis, which is sunburn of the eyes. This all highlights the safety aspects of wearing goggles by both the examiner and the patient whenever an alternate light source being used. I have had programs where they're like, "I have an alternate light source." "Okay, so where are the goggles?" "Oh, we don't have any goggles." If you don't have all the right equipment to include the [PPE 00:37:58], don't be using it. It's also not helpful when you're trying to use it as an interpretive tool, as well.

Now we'll focus on what happens when light shines on a substance, specifically skin and substances that may be on the skin. When light shines on tissue, it may be absorbed reflected, fluoresced, or a combination of all three. You may also hear that light can be transmitted through an object, meaning it passes through; think of water or glass. Think of a glass of water. The light passes through the object, which causes the light to change speed and direction. Transmitted light is not relevant when we're using ALS for SAFE purposes. We're not going to talk about it here.

The amount of reflection and absorption results in people seeing different colors. Wavelengths of light that are reflected become the visible color of the skin surface, whereas absorbed light appears as darker colors. For example, the color white reflects all visible light and the color black absorbs all visible lights. Light that is remitted at a longer wavelength through the process of fluorescence appears brighter or glowing compared to the surrounding reflective light. Another way to put it is that fluorescence has to do with the object absorbing some of the energy and emitting it back at a lower energy and therefore a longer wavelength.

When light penetrates the skin, the degree of reflection is influenced by the presence of any blood in the skin that has resulted from injury or disease. So the pattern and wavelength of the color of the fluoresced and the absorbed light may show the presence of bruising or other injury as darker absorbed areas. Colored filters, as with colored goggles and colored camera lenses used to block the reflected light, allow the fluorescent areas to be seen as brighter areas, whereas absorbed light appears darker in comparison. You see this example here of a shirt where in ambient lighting, you do not see the potential [imaging 00:39:52] that's on there, and then we have the ALS that's shined upon it, and the appropriate goggles are used or filters are used and you can see the area that is fluoresced there.

The biological and biochemical changes of the injury result from the rupture of blood into surrounding tissues causing bruising and the collection of hemoglobin and melanin and [bilirubin 00:40:12]. These natural lights absorbing organic components of tissue are called [chemo forced 00:40:16]. The light absorption reveals concentrated darker areas that create contrast between normal and damaged tissue, so the absorption causes increased energy level within the skin, which excites the electrons within the molecules. Again, this is one of those things in the national protocol; it says it could be used for helping to identify potential areas for evidence collections, because we see the different things for us, but it also can help with injury identification.

It's still investigational. So if that's something that you're considering using at your facility, I encourage you to go back to the literature and see what the literature says right now, because it seems to be conflicting how useful it is. Maybe I can see there's a potential there within injury , but you really need to have a clinical context before you're able to provide meaningful information to what you're seeing there.

When you look at the figure, something to think about here is what are you noticing, as far as where are the items fluorescing at. Most of the items of interest for medical forensic examination purposes fluoresce between the 415 to 500 nanometers, which are the shorter blue-violet wavelengths, if I was using the blue light on the surfaces. There was a study in 2016 by [Pollett 00:41:29] et al., and they conducted a convenient sample of 81 adults to see if 14 common topical products would cause fluorescence or absorption with the use of UV light. Six products were found to fluoresce more than 40% at the time. Those were A&D ointment, Bag Balm, Preparation H ointment, make-up bronzer, Vaseline, and Murray's pomade. The products utilized, which were solely selected based on what the participants had reported using.

Other items to consider are any substances that contain metal components such as a shimmer makeup, as those fluoresce as well. We see that vaginal secretions can have low levels of [acetophetates 00:42:10] And it's important to note that these [ophetates 00:42:12] often can produce a light fluorescence as well. So the fluorescence isn't diagnostic in and of itself, but it does give an indication that maybe based on their history, this would be an area we would want to go ahead and collect a sample from.

Also, getting that patient's history is important and their previous medical conditions is important because we see that certain skin infections and conditions have been founded to fluoresce, especially with the Wood's lamp, which we remember is it outside of this 450 to 500 nanometer range, which is more in the 380 to 440 nanometer range, so we might miss something if we're solely using the Wood's lamp, whereas the Wood's lamp is good for detecting fluorescence in the skin and hair caused by [dermacites 00:42:56] or fungal infections. Depending on the organism, it could fluoresce as blue to green or pale to white. They can fluoresce when there's an instance of life. Knits that have unborn louse fluoresce white, while those that don't fluoresce gray. Different types of bacterial infections can cause in their toe webs or their groin or their [axilla 00:43:20], they can show as a brilliant coral red fluorescence.

The point being there can be other causes to why something is fluorescing, especially the different types of patterns you may or may not see. It might have to do with the wavelength device that you're using and maybe it's a skin infection. Maybe that's something that's known in their history, so we want to have that information. Or is it something due to something else? Either way, I'm not going to diagnose it because it's out of my purview there, but it's helping that interpretation of the findings that I have, and I'm going to potentially collect samples from those areas.

Next here we have bruising and lighting. When light is released into the extravascular space, hemoglobin is broken down through enzymatic processes to include bilirubin as one of its byproducts. Since UV light penetrates superficially into the epidermis and is reflected or absorbed by hemoglobin, [keratinides 00:44:13], and bilirubin found in the bruises. Therefore, ALS fluorescence may be or may signify bruising that is not visible to the naked eye, also called subclinical bruising by some, like Lombardi et al. in 2015.

There was a study in 2019 by [Staffide 00:44:28] et al. and they conducted a randomized control trial of 157 individuals when they were trying to look at bruising and ALS and such. Bruises were inflicted on one of the person's upper and lower arms, both on the same side. The bruise to lower arm was inflicted by dropping a six ounce weight down a five foot pole. The bruise to the upper arm was inflicted by a paintball fired 20 feet away and this was consistent with being instruct by a whip. The bruises were then assessed by 14 trained nurses and researchers at multiple times from 30 minutes up to four weeks later, and their findings were interesting, and they included things such as, they [knew that 00:45:07] absorption was detected under ALS more frequently than with visible discoloration under the regular ambient lighting for both the upper and lower arms, so at four weeks more bruises were visible on the upper arms under ALS than under white light, again, because of that contrast and showing that contrast and the different wavelengths that we were talking about.

The ALS of 415 to 450 nanometers using a yellow filter had greater odds of detecting a bruise than white light while controlling for subject's characteristics. All other wavelength and filter combos were less effective. So the color of our filter matters. Do we have a yellow filter on hand? A orange filter, a red filter? What are our filters? Women developed bruises to the lower arm more frequently than men, which the authors theorized may be due to localized fat distribution. The odds of detecting bruises created by either mechanism and viewed under any light source decreased by 12% for every additional 24 hours post injury. The authors noted that in the absence of trauma-related history or other physical findings consistent with bruising cautions should be used when interpreting light absorption in isolation. Lombardi et al. noted low specificity of latent injuries on individuals proving no history of trauma.

Basically, what I got from that is they could notice that there was some bruising, but they had a clinical context to be able to on understand what they were seeing a little bit better, and so without that history, we need to be cautious about how we're interpreting the injuries we're finding. Since skin will fluoresce in areas that are not limited to bruises, like bodily fluids, skin conditions, infections, detergents, lint, deodorant minerals. Like I mentioned on the previous slides, it's important to understand the role of false positives before interpreting ALS fluorescence as a bruise. So proceed with caution, but go and educate yourself on the information that is out there because there's a lot out there.

Next, we have when purchasing an ALS device or becoming familiar with your equipment, you'll need to determine the type of wavelength it has. How is it powered? Like I mentioned, the wavelength of the Wood's lamp is in 380 nanometer range, whereas of other ALS devices, it could be between the 400 to 500 range.

Light intensity: some cameras have the ability to increase or decrease the intensity of the light. If you have the intensity to high, it can create a hotspot, as you see here in the bottom left where the light is being shined upon on the surface and you've got the white central area and you can no longer make

out what's in that white central area. That's a hotspot. You could have a diffuser that can help mitigate those hotspots that I'll show on the next slide. How far or the distance in which you're holding that light source from the object makes a difference, because that has to do with the intensity. The closer you are to the subject, the greater intensity; the further you are, the less the intensity.

A study in 2015 by Lincoln et al. was conducted with ALS at five centimeter, 10 centimeter, and 20 centimeters from the surface. It demonstrated that subjectivity or subjective visibility of fluorescence increased as the distance of the light source from the target surface decreased. Meaning if I had it too far, I wasn't able to pick up or see anything or appreciate something as fluorescing, whereas as I got closer, I was able to appreciate it a little bit better. I did not find, though, anything in the literature as far as the recommended range. So again, they did their test at five centimeter, 10 centimeter, and 20 centimeter, and the closer they were, the easier it was to identify injuries or identify something that fluoresced, rather.

Excitation filters and goggles that I mentioned previously, and I have other sides on that, and then the ambient lighting, which we talked about with the equipment and everything, as well. This is an example of a diffuser. You see just the light source without the diffuser and then this program manager has bought a diffuser for the program and just attached it to their light source, which here is just a little wand. Others have light sources that can be directly attached to the camera, as well.

Here's an example of with and without the diffuser, the one on the left hand side. They shined the light, they took a picture, and you see how there's a hotspot and you can't make out the word snickers in the little candy bar there. They applied the diffuser and now you can see the image, the entire area, much clearer.

This is an illustration as to why the barrier filters are needed or those goggles that we're wearing. The alternate light source is shown upon a substance and that substance or substances absorbs, reflects, or fluoresces, as we mentioned earlier. In order to visualize the fluorescence, a barrier filter, also called an excitation filter here, blocks the excitation light and in this case, it's the blue light, and allows the fluorescence, in this case, it's the orange light, to pass through and be detected.

Visualizing and documenting evidence by ALS requires use of the barrier filter. During the fluorescence process, light admitted by the ALS, like I said, the expectation wavelength, is reflected back to the eye, overpowering the emitted fluorescence, often rendering it undetectable. So barrier filters enable visualization of fluorescence by preventing transmission of light at the same wavelength as the expectation light to the eye or detector, which could be the digital camera. Light produced by the fluorescing compound passes through the barrier filter and is detected by the eye or the camera, whatever has that barrier filter on, so it's blocking some and only allowing certain light or wavelengths to pass through. If you want more information about that, I encourage you to check out the landscape study that I mentioned at the beginning. It's also in the references. You see it here at the bottom, as well. Sometimes it's a little bit easier to go through and assess or read that individually.

The last picture I have here just stresses some of the common mistakes that could be made when using ALS, as far as the type of excitation or barrier filters that you have or goggles. It demonstrates the use of using the correct barrier filter. In the first one here, there's a semen stain that's illuminated under various lighting conditions using different camera settings. The first one is under white light, so the stain is hard to visualize, and there's little contrast between the stain and the background. The next image on the top immediately to the left [is B 00:51:21] with blue light, with an orange barrier filter. So we have the proper camera settings because we have a well-defined stain.

The next one, C, we have blue light with no barrier filters. So why do I need to wear goggles? What do we see here? Nothing. The blue light overpowers, so we don't see that excitation. In D here, we

see that there's a blue light with the incorrect filter; a red filter is used, so the stain's not clearly defined. Then in E, we see a blue light with a yellow barrier filter. There's some contrast, but it's not as optimal. Then we see F, a green light with an orange barrier filter, so it's the incorrect wavelength of light that's used and no visible fluoresce is appreciated. G, there, we have blue light with an orange barrier filter that was built with a camera flash was used, and then H had a blue light with an orange barrier filter with no tripod used, and so it's a little bit blurry, as well.

We can see how having the right equipment, knowing how to use that equipment is very important, and being able to understand what I'm seeing before me and why I may or may not be seeing anything could be due to some of the equipment issues that we talked about.

So that's just an overview of medical forensic documentation, as well as ALS. It's used some of the technical uses during our examination. I will turn it back over to Commander Hernandez for alcohol-drug facilitated sexual assault and toxicology.

Speaker 1:

Okay, yeah. Good to go.

Speaker 2:

Greetings again, this is Commander Hernandez. And as Commander King said, we'll be going over drug facilitated sexual assault and toxicology. So going back to our original case scenario, our patient reports that they voluntarily consumed alcohol immediately prior to the assault. So based on what you know about toxicology, would it be indicated for this patient? And the answer would be yes, as long as she gives consent, because she has elected an unrestricted report. She has recorded within 96 hours. If you recall, she was looked in about 24 hours of the event and then there will be a yes answer to the voluntary ingestion of alcohol. So if she had also said yes to loss of memory, lacks of consciousness, or if she'd vomited or had involuntary ingestion of drugs or alcohol, a yes or unsure to any of those is an indication for toxicology.

So a few things about toxicology. We do need our patients consent in order to test these samples. There may be various reasons that a patient doesn't want it done, but if they're going to have toxicology completed, a few things they need to understand. Include some types of drugs detected by testing. So they also need to know that if they voluntarily consume something, maybe like post assault, like if they took something for anxiety or for sleep or anything else, but that can also show up. There are some limiting factors for detection, probably the most common one we see is going to be any delay that they've had in reporting. So many of these substances have a very quick half life or quickly metabolized from the body. And so that's probably the greatest limiting factor.

How do we interpret negative results if they come back with no substances found? Does that mean that they weren't given anything? And then how do they obtain access to their results? So if we're doing medical lab, so that clinical toxicology, those results can be provided to the patient by whoever was the ordering provider. So generally the clearing medical provider in your ED or your clinic. But forensic toxicology results are sent to law enforcement. And so that's who would be providing the patient with their results.

So when we're talking about sample collection, we do collect blood, as we said, within 96 hours of the assault time. The sooner, the better. If we have refrigeration available, that is the preferred method for storage. But if you don't have it available, it should not be a deterrent to collection. These gray top tubes do have a preservative in them. And that is to prevent further breakdown out of any substances that might be there. And also to prevent any overgrowth of bacteria or fungus or whatnot can do. Please fill them completely. And you want to make sure that you package them in the appropriate box. The same box that you got them out of, the toxicology box. There are seals in the box and you can see them placed over the blood tubes there in the bottom picture. Once those seals are on they're on. So if they go on crooked or just not perfect, you just have to leave them. Because if you start to peel them away, it will lead the word void on the tube. And that's not what you want to happen.

If for some reason, all you have is an expired tube, you can replace it with tubes that you have at your facility. If you have them, if you don't then go ahead and still use the tube. It may be still possible for the lab to be able to evaluate the specimen. So go ahead and collect with what you have. For urine, again, within 96 hours and the sooner, the better. Please remind your patient, and then also ED staff or clinic staff that may be assisting or giving instruction to the patient that we prefer a dirty urine collection. And this is to reduce the disruption of any potential evidence that might be on the genital area.

If they do a clean catch where they're cleaning the area or wiping, then you can imagine that there goes potential evidence along with that wipe. If they do wipe, collecting that wipe can, you can send that to the crime and lab. We do want to make sure that we're collecting at least 30 MLs for the analysis of that, the complete analysis. Again, refrigerate if at all possible. And then you can see on the right picture, how the specimen has been sealed and labeled and just make sure that you are feeding all the appropriate information on that label.

So we talked a little bit in my last lecture about the forms at the back of the 2 11, pages 13 and 14, ensuring these are completed. If we are doing toxicology, again, a reminder of the current policy at the time of this recording is that it's just only for unrestricted cases. I do realize there are some pilot programs out there who may be doing this when the patient has chosen restricted, you know who you are, if that's the case. And it could be that the policy changes at some point in the next year to allow us to do restricted toxicology, but that is not the policy currently. Inside the toxicology kit, there is a form that asks for the exact same information as the pages 13 and 14 of the 2911. You do not have to fill out that form as well. You can just discard that, use the pages 13 and 14 and ensure to include one within the toxicology kit itself.

So as I mentioned also before, the toxicology kits are not run at your local facility, they are processed by the Armed Forces Medical Examiner System. And this is a lab in Delaware. They do have their own separate chain of custody form, and you can find it at the website referenced on the screen, if you do not already have it. And that's what the form looks like. So ensure that you have reviewed it and that all of your examiners know how to access it and complete it. So in the storage of our toxicology specimens, we want to make sure, as I mentioned again, that refrigeration is preferred, but please never freeze. That can actually change some of the characteristics and properties of the specimen, prefer to store at room temperature if that's the only option. If you're in a remote location, a deployed location, better to kind of explore what you're going to do prior to the actual storage of these so that they are maintained in a secure location and in an area that has an appropriate temperature as well.

So some common clinical effects or clinical patterns that your patients may report. If they've been affected by drug facilitated sexual assault could include nausea, vomiting, dizziness, they may report loss of consciousness. They may report some impaired muscle coordination feeling really drowsy. There's a possibility of CNS stimulation depending upon what they may have been given or taken, to include tachycardia or hyperactivity or increased energy. Some common clinical pattern is that they could experience intoxication suddenly, or even out of proportion to the alcohol they consumed. You know, maybe they're well versed in how they respond to a couple of beers and a couple of shots. And this time they passed out when that would not normally be their response.

They may report that they left a beverage unattended or that they woke up in an unexpected location, or perhaps even with someone they did not expect to be with. Their clothing may be rearranged or on inside out, or removed all together. And they may report genital or rectal soreness or trauma, stains on the clothing that are suspicious. And they could report, they have no memory, or they might have these kind of flashes of memory or cameo appearances as well.

So a reminder that your patient may present in an intoxicated or an impaired state. They may have been brought to the ER by friends, or maybe their friends called an ambulance. So they may not even be aware of why they're present at your facility and if they are intoxicated or impaired, they are not able to consent to an exam. So the clearing provider, as well as you, as the [inaudible 00:09:54] are responsible for knowing this patient is clinically sober. And there's not one blood alcohol concentration that says, "Okay, now the patient's sober." This is very patient dependent. Dependent upon the sex of the patient, whether male or female and their experience with alcohol as well. Maybe even whether they ate. So again, this should be a clinical determination and not one based upon a lab draw.

So we've already talked about collecting toxicology as soon as possible. And that clinical toxicology is used by declaring medical provider to help make medical decisions for the patient. So, one question I would like to ask is if the patient has no or minimal history, which is often the case for those who may have been impacted by alcohol or drugs during the sexual assault, where should the [inaudible 00:10:53] collect samples? If the history is supposed to drive my physical exam and sample collection, and I have no or minimal history, what should I do? So I'll pause for a moment to let you think about that.

So the National Institute of Justice did produce a best practices for sexual assault kits in 2017. And they did include a section on those patients who you have little or no history. And their recommended areas for sample collection are from the ones that you see here on the screen considered to be potentially high contact areas and higher yield for biological substances. So I would encourage you to either look up this reference or write these areas down in the event that you do have a patient with little or no history. Because if you do this long enough, this long enough, you will definitely have a patient who presents in this manner.

So we also want to include if the patient voluntarily uses any drugs or alcohol. And as I mentioned before, even if it was after the assault, maybe they used it to self medicate, maybe it's prescribed to them for their already preexisting anxiety, or maybe they borrowed it from a friend or whatnot, but we still need to document that. And keep in mind that it could be that the patient is impaired or intoxicated after the assault, due to how they're coping with the effects of the assault. And until they're sober, they cannot not make an informed decision about doing an exam.

So for our patients who have no or minimal memory of the events and suspect that they may have been given something, any symptoms that they can recall, did they feel dizzy? Did they have a headache? Did they become all of a sudden, very sleepy and have difficulty walking? Anything that they can describe, we should include in our history. And then again, with the limited memory, whatever they can remember immediately prior to the blackout, and then what is the next thing they remember upon waking or becoming aware of their surroundings?

So how do you determine if a patient is clinically sober? Well, you do have to do a clinical assessment, you do have to be aware of their neurological function. What is their cognitive ability, their speech pattern, can they answer questions appropriately? Can they stay awake? What is their ability to exercise fine and gross motor skills, and then documenting these trends over time. And so making sure that this is documented in the medical record and there's documentation also on the 2911 is important. So that concludes the toxicology-