His grandfather was a physician in World War Two. And his grandfather was in Italy. He was walking up through this path in the mountains. There was a soldier with a fatal wound. And he looked down at the soldier, and at that time what they do would take markers and they mark your forehead with your triage category. So he marked them as expectant. And that soldier looked up at him and said it's OK, Doc. I've accepted this. It's OK. Geoff Ling's grandfather held that soldiers hand until he passed away. That isn't the only example. Frequently, it's nurses that are there holding hands. Of individuals. So that's what really leads into this conversation of combat palliative care. If we're having more expectant individuals on the battlefield, who's going to be there with them? Because that's a pretty significant period of time end of life issues, right? What's going to be a nurse? Most likely. We're medic or a physician like I've described. What? Geoff Ling. As you talk to these individuals, most individuals that tell you I don't fear death if I'm dying for my country. We all know that's kind of a side of a blanket thing, right? I know I don't wanna die, right, but most of your soldiers you go talk to. If you go into that ranger of battalion over here, you go talk to some special operations individuals. I bet you they say that I'm not afraid of dying for my country. Now if you pull away the layers, what are they gonna really say when you start getting at the truth? I don't want to die alone. I don't want to die in pain. Currently right now there is no policy that governs palliative care and combat for pain management and anxiety management TSNRP is championing this right now. Trying to shape it, trying to see what we need to do, because guess what, it's not new. These World War Two nurses were experiencing it, and they were doing it on daily basis and they were good at it. There's survivability rates were pretty incredible to if you look back at the technology that they had in terms of medicine. So this is a major issue we continue on with the psychological impact of the Warriors and clinicians. This is particularly getting after something called secondary triage. What happens if we have a patient that we triage and say, OK, this patient could go back to the operating room, we have supplies to take care of him or her. Or they. We get back out of the operating room there in the ICU, the develop ARDS. They start consuming a lot of supplies. It's unsustainable. We're going to have to triage that person again after we've already committed resources to them because in prolonged care environments that may be a challenge. If we triage them again, what are the ethics involved with that? Ooh, that's a hard one, right? Tough. But those are the hard questions that nurses need to help answer. Because we're going to be there holding that hand. There's a major gap in the literature right now, so we're chasing after this in the high priority award that I'll talk to you a little bit more, next slide. BioBehavioral health, PTSD, all these different things. I think we've heard this over and over again. The one thing I am going to emphasize to you here is the spirituality piece that's a major issue because a lot of times we're in these FRDS. We're in these medical units and we don't have a chaplain available. If this individual is Christian, who's gonna pray? With this soldier. I'm not a spiritual leader. I don't know what to do. Should we have spirituality training for nurses? I don't know. Research needs to be done in this. It's starting to answer that. That's where TSNRP comes in. Next slide. And I would be remiss if I don't talk about General Patton in a story about Italy. Talking about PTSD, so General Patton, I think all of us may has anyone ever seen Patten and the infamous scene when he smacks his soldier that was suffering from shell shock at that time? PTSD is what we know now. He was relieved of command immediately. That it was sent back to England. It's pretty amazing, but I put this up here to note that we have changed a lot since World War Two in a positive way. So we have evolved and we need to keep on pushing that envelope through nursing research and evidence based practice. Next slide. All right, nursing practice competencies is something that I have to talk about every single time we're talking about skill acquisition, maintenance, extinction, right. You learn a skill, how long you're going to know that skill before you forget it. There's a lot of really cool things that are going on right now in different nations, specifically in France. They're using gaming technology, teaching medics TCCC through gaming. And trying to meet these competencies. Pretty cool stuff that's going on. How do we employ those things?

Well, we need research to bring it into the United States military. Next slide. I put this slide up here specifically because I think there's going to be an opportunity for change. Generally, we do retrospective research most times when it comes to combat type things, but I think it may change because with the electronic health record that may go in to role twos and role threes, perhaps role ones, we may have an ability of looking at prospective research. The only problem is you got to. You got to get it through an IRB. That's gonna be a tough one, right? But it is feasible from what I've been told. Next slide. Here's some of the current research assets that are in the Department of Defense. So of course I put TSNRP at the top because I am biased. Uniformed Services University has a lot of resources, but the vast majority of resources of research rely actually lies in the Defense Health Agency and actually was led by General Simonson until just recently. Until you move to your new job right ma'am. So the J9 actually possesses a vast majority of the nurse. The research capabilities within the military. So it goes from the joint trauma system. Tantric. MRDC and goes list goes on and on and on. The one that I will add at the very bottom is the Navy Medical Research Unit, which is a little bit separate. Right now they focus on Navy research on this and there's multiple satellites of that particular organization throughout the world, specifically looking at infectious disease and a few other things. So next slide. So TSNRP, I'm not going to spend any time on this because I talked to you about it. I'd love to talk to you more about it. You just let me know. Because I know I'm getting a little short on my time. Next slide. This is ultimately the key takeaways. What I want you to know is history's your friend. Take a look at history to try to inform what we're gonna be doing for the future. Right. Do exactly what Winston Churchill asked us to do. In addition to that. We have to be ready to meet our mission. We could potentially go to war at anytime, and I don't want to sound all catastrophic and In the sense of, you know, being an alarmist, but it's a real reality. We live in a volatile world right now, and it's a it's a significant. Significantly difficult diplomatic environment that we reside in, particularly with the war in Ukraine right now. So we need to be prepared mentally and clinically. And of course I'm going to end that. TSNRP has all these tremendous assets for you to chase after your particular goals. Next slide. So right now, TSRP has a high priority award call. I'm not gonna read these all off to you, but these are all the particular areas that we released in addition to our A call. So traditionally the A call focuses a lot of the DHA efforts that we do. There's quite actually a vast majority of TSNRP DHA efforts that we fund, they come from military treatment facilities when people just like you. But with the operational side, that's becoming more and more. These are the major issues, the one I'm going to point out that I found very fascinating is the severe burn. Component was the last time that we were thinking about Burns in combat, right? In addition to that, well outside of BAMC at the Burn Center. Because they are so specific, that's all they deal with. They actually picked up patients in Iraq and Afghanistan with burn injuries and brought him back to BAMC. But if we're talking about large scale operations, I'm not sure if that's going to be feasible in the future of just having one unit for all the burns so we need to become proficient in burn care. In addition to that CBRNE. When I first started deploying, I brought everything. Boy, we had all the MOP gear, we had your mask, your filters. You had all these things. You're sort of walking around and you just you're just Oh my gosh, charcoal everywhere. You got it all over your skin and it's just crazy. What I went in 2010. I just had a gas mask, right? I just had a gas mask. They said don't take any of the other MOP Gear. Just need a gas mask. We got plenty in country. OK. When we got to country, they didn't give us anything. They just said. Give me your gas mask. You don't need it here, OK? In 2018, they I asked for it and they said you don't even like. No, we're not issuing that out. So I took nothing to Afghanistan in the last time. In terms of CBRNE, well, just so happens in the near peer adversaries. The hip actually is they've deployed these weapons systems. Who remembers when Russia deployed weaponized fentanyl against the Chechen terrorists in the school in the late 2000s? You remember that killed everyone in the schools, including the children that they were trying to save Right. So. These or these near peer adversaries have employed these

particular weapon systems, and we need to be prepared for that. So in your training, has anyone received? CBRNE training recently? So probably the rudimentary things, but how about conducting nursing care while we're wearing MOP? So there's a lot of research opportunities in that, right in terms of policy, in looking at the practices themselves, perhaps EBP, how do we do things better? Questions to ask. Those are rubber gloves they have with MOP. You imagine if they get blood on them or you gonna be able to hold a suture, you're gonna be able to hold instruments? I don't know. Let's do some research and find out. Next slide. So ultimately the question is, are we ready? In the nursing community, in terms of our capabilities, the answer is yes. We're ready to go to war. We will meet the needs. But we have to constantly improve. To be better. Next slide. Any questions? Yes. Umm. Topic of specific Ranger soldiers who have the universal blood type for giving to everybody. I can't remember, it's true low, titer O individuals, yes. Is there a goal there? One of their specific, that is I don't know if that's true. That sounds like fiction to me. I think every soldier is every soldier. But yes, you are identified as a low titer O individual as a potential donor for whole blood donation on the battlefield. So it's a great thing to have, but obviously it's not screened to the level that we can screen in the lab, right. So it's not perfect, but an emergency where you're saying you're stuck there 14 days, you're blood products are expiring. Maybe that's a component that walking blood bank and we do it all the time. Yes, ma'am. And we identify those individuals who have low, titer blood. I was referring to the issue of an individual's presence strictly because there are O negative, right? Yeah, that's the way I heard your message. So the answer is no. Yeah. Sure, sure. I don't know if they're preferentially chosen. Sounds reasonable to me if I was going out on battle. I'm O positive, so it works out. Yeah. That's true. That's something the skill set who happens to have the golden blood. So fun fact out of research. You can. No, no. Yeah, so fun fact out of research, you could take one unit of whole blood from an individual without impacting their physical capabilities. One unit and you can't take another unit until another 40 days. They have to make the red blood cells again. So. Yeah, sure. Yeah. That's an interesting thought. Yes. Any other questions? Intense stuff, right? Who knew you were gonna get a lecture on that, right, so. Well, hopefully. Yes, it sounds scary, but that's OK. That's reality, right? Everything's scary. Like when I came out here without a jacket, that was scary, right? So we just got to be prepared, right? Just gotta I packed my jacket in the luggage, right? So when I went outside, I was just like, Oh my gosh, this is. What is this? This is in San Antonio Heat so. So yes, we it is scary, but. Just think about the amount of courage that we have as a nurses and think about what we do for our patients. It's not unlike the fact that perhaps you could appreciate this. Whenever I take care of a patient, I treat them as if they're my family member, right? And. I really care for my family and I'll do anything for these people. So. So I think when we're pushed to that brink, I think. I think military nurses will stand up. And be able to carry on. And stand on the shoulders of giants because they. They had it really scary. But they showed that it was feasible and they found they used ingenuity and critical thinking skills in order to come up solutions. And if anyone asks me what the greatest asset of a military nurse is. It's the critical thinking skills that we have. We're able to come up with solutions when there seems like there's no hope. But we come up with a solution. We figure it out. So. And that's pretty amazing stuff. So any other questions? Yes, ma'am. Yes, ma'am. What? What's the number today? I know it's not 40,000. It's probably less than 10,000 somewhere in that range. It depends the actual numbers. I'm not sure if. I know precisely what the actual numbers are, but it's definitely not to that level. That's actually something that I've been concerned with and I brought it up with some individuals and we're actually starting to looking at opportunities. How do we flex the nurse corps in terms of recruitment when we go to war, where are we going to find these individuals, right? It just so happens we're in a nursing shortage. I think we all know that right now we're in a nursing shortage, not only a nursing shortage. There's a physician shortage as well. So where are we going to find these nurses? Right. So we need to start. We need to come up with a solution.

Now, the solution back in World War Two was. Expedited nursing schools. Right. And they didn't have to go through all the specific training. In fact, when you read the book, hopefully you do, you'll be shocked. I went through 2 1/2 years of anesthesia school, but these nurses were doing anesthesia after three months of training. It was pretty amazing, right? And I was just like, well, I need to. I need to get things together. These people definitely are much better at that than I am. Right? So. But I think we need to come up with the solutions now. And that's the type of thinking we need. To apply that to nursing research and evidence based practice. Ask those questions. What happens when we pull all the military nurses out of our facilities? What are we doing next? I don't know. What are the contingency plans? We gotta ask those questions. And I saw another hand over here. That's a very good question. Now I think we may have found identified a potential solution which is utilizing those individuals who were medics. So right now the MEDCO has a fantastic program that providing college credit to medical medics who have gone through training and so the hope is that we could align that curriculum to be able to create an ADN nurse right out of that curriculum with additional coursework in order to prepare them. That's just something we were spit balling inside. You know, that was where the room where it happens, kind of thing, right? If those Hamilton levelers out there. So we were just sitting in a room kind of talking through some ideas and trying to figure out. What are possible solutions to that so but yes, that is something that keeps me up at night. Yes, ma'am. You talking about like? For worst case scenario, drafting nurses, whatever. Well, interestingly enough, if I remember correctly, they didn't have to do that in World War Two. They didn't draft nurses, they drafted everybody else, but they didn't draft nurses. They asked for volunteers for nurses, right? So. UM. That said. I can't. I can't answer for Department of Defense. I can just tell you from a nursing research perspective and as a father, right. As a father, I really hope that we maintain a volunteer army that doesn't necessitate that, and that individuals will volunteer, and join the cause for the military as we start to move forward. I hope that that's the case, but unfortunately I don't have a crystal ball. I can't tell you what precisely is gonna happen. Any other questions? Yes, ma'am. Ohh, I'd hire them because they don't have a one year of experience as an RN. Do they have anything about the change in those policies? Gosh yeah, I think you're getting into an area that I can't address, but General Simonson can. Sending a package up to OPM and that is one of the one of the project. One of the key components on that is the one year LPN to RN and also the direct hire. Out of out of school where we hire them and then pay them at a lower rate. Direct hire RNs. In addition to that, the title 38 and several other authorities so that we can bring folks on quicker, but this is not about hiring, but it's gonna be important if we should get people on and have our force ready to go. So thanks for asking that question. If you want to talk more later about human capital, we can talk after. You're welcome. I'm so glad that General Simonson's here. Any other questions? I think we're nearing my ohh. We may be over my time. Right? So, but thank you very much. Been a pleasure. Hope you learned something.

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Yes. So Colonel Yauger traveled all the way from Bethesda, MD, at TSNRP and the Uniformed Services University. And when I asked him to be a presenter back in October, he did not hesitate to volunteer to come in person. And for that, on behalf of teammate, and we're extremely grateful to have your presence here, Sir. Thank you. I will now announce the 10 winning names for the next door prizes. Again, winners will receive gift card, mug, or a badge reel with a battlefield and disaster nursing pocket guide so those names are Cynthia, Nathan, Debbie Nielsen, Dorothy Doctor, Mark Hennecken. Holly Lindsey, Michelle Clowers, Curtis McKee. Dawn Mitchell. Andrea McMackin. Sandy Kneib Kindra McCoy. Anne Lantz. And Stephanie Heavner. We are now going to take a break. Please visit the vendors, located around the room. Please be back in your seats by 1435.

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Ladies and Gentleman, the next guest will start their presentation in 2 minutes. Please find your seats. It is My privilege to introduce our next speaker. Miss Christina Yoon has been a nurse at Madigan Army Medical Center for 13 years and has served as the general surgery department's bariatric program coordinator and MBSAQIP surgical clinical reviewer since 2020. Please help me welcome Miss Christina Yoon.

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So yes, I am vertically challenged, and I'm also allergic to everything in Washington state. So if you hear me hacking, I apologize. I don't have COVID. I've been tested for other things as well too, but yeah, so. I know that we are starting to drag at the end of the day, it's always with these conferences, so I'll try to make it entertaining. Thank you very much Jessica for allowing me to speak today and we will have words for making me go after Colonel Yauger. That was cruel and unusual punishment. I'm the bariatric program coordinator and basically what that means is anything that has to do with metabolic or bariatric surgery or the pathway for our patients. I hope to facilitate that, whether it's primary care, working with general surgery, network providers, DOAS kind of I've got my fingers in like all the little pies. Our institution is MBSAQIP accredited, and that stands for the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program, and DHA is now putting forth their stamp of approval that military treatment facilities that meet the appropriate designations within that accreditation entity. They want them to become MBSAQIP accredited, so I also act as the unofficial. Me reaching out to other entities which currently I think we have Evans Army Community Hospital and William Beaumont. Sorry I took two hits of albuterol. So if my voice is shaky. Umm, if we could go to the next slide or am I able to do it? Help. There we go. This is gonna be the most entertaining slide that you have this entire presentation. Everything is going to be super dry, but I have no relevant financial or non-financial relationships to disclose relating to the content of this activity and all of the opinions in this presentation, views are expressed as my own solely. So at the conclusion of this activity. I really hate reading off the slides you guys can read the slides and just listen to the dulcet tones of my voice as I put you to sleep. So with this MBSAQIP clip has a training requirements. There are three of them, and by attending the training here, either in person or via teams. Umm, you'll not only earn your CEU for it, but you will meet two of those training elements, so you won't have to go into Relias or Swank to do that. You're welcome. For those for those departments that this is a requirement for you, which you may or may not know about. It's going to be a DOAS, the surgical services center. Umm, of course. General surgery bariatrics, the nursing and the General Surgery clinic itself and also 6 North and 6 North and 7 North we touch with ICU as well because on the very rare occasion we do have some of our post-surgical patients go there, but it's typically overflow because of bed availability and not necessarily because something went horribly wrong. We will talk more about a risk of death afterwards, but it's pretty safe surgery. It's less than 1%. We're also going to talk about three of the most common bariatric surgeries that you might run into if you're providing patient care, whether that is in the inpatient bedside setting or in the clinic, whether patients have come in and they've had a history of surgery or they're looking to have new surgery or they're looking to have a conversion. And then lastly, we'll go over postoperative complications and long term follow up needs. Some of these patients will need to be followed for the rest of their life because we have gone inside and reorganized all of their internal organs and they don't process food and nutrients like they typically do anymore. So, obesity, BMI, there is a lot of pushback about BMI and. It's valid, right? If you are a professional athlete

or a power lifter and you have a BMI of 35. It's not really a great indicator for that subset of the population because they are going to have more muscle mass compared to fat mass. And so what we use BMI for is it's an initial indicator. It's like the Canary singing in the coal mines, right. It's just. Oh, maybe I should look at this. Maybe I need to do something about this as a provider or as a nurse. And so BMI is reported. It's a calculation based on height and weight. You see it automatically generate inside Genesis when you're putting in your height and weights for your patients. And it comes and it's reported as kilograms over meter squared. So I'm going to walk out here for just. Ooh, sorry, I don't know why I get here for just a minute and. Why do we care? We care because obesity correlates to hypertension, type 2 diabetes. dyslipidemia. OSA. Fatty liver disease, degenerative joint disease, osteoarthritis and it's also linked to increased risks of having some cancers like breast cancer, colon cancer, and liver cancer. This is the pretty little map and it just tells you, uh, percentages of obesity by state and this was from 2019. So with the pandemic, we know that access to healthcare was drastically decreased for many individuals, not just because they couldn't get into the hospitals, but because they were afraid to come to the hospitals right. And so they delayed their care. And for a lot of patients, they or not patients necessarily, but for people in general, they stayed home. And I don't know about you, but I'm a stress eater. I particularly like Cheetos. The white ones that are puffy. Not the best thing for your bariatric program coordinator to be snarfing down during COVID because I'm stressed out, right? So why do we need to know about this? 70% of the US population has a BMI of 25 or higher. That means they are overweight. If you hit 30 BMI or higher, you considered to have the nomenclature. Is that the right word? I'm trying to use big words today and sound smart. If you're in 30, BMI. You're considered to be obese, so I dress to hide my fat, but I like to flirt with it because I like to sit around 24 just to kind of keep things interesting. Keep me on my toes. But being overweight and we know not only is difficult for the patient. ICUs, CRNA's bedside nurses because not only are you helping to ambulate these patients, but you might need to go grab help in a situation where you're already short staffed to shift the patient, put them prone, put them back again, right. And then the patients themselves. Some of them, if they're BMI is really high, they can't lay flat. Right. They'll have a hard time breathing. Umm. And then bed sores. Right? Nobody talks about that. Umm. Do you know that here? Does anybody ever check their equipment to see if? Ohh sorry. We won't go to that. I'm getting ahead of myself. Why do we need to learn about obesity care? So the first part of this presentation is focused on sensitivity, right? How we describe the patient when we give report not only affects the individual receiving the report because they're developing a mental picture and a medical picture of the patient, but also for yourself. You are projecting your own preconceived notions or, dare I say, prejudices about your patient. I can tell you when I worked on L&D if had a Mom come in with a BMI of 40. I know I was not gonna have a good day. I went back into the room and put my sport bra on because I knew it was gonna be a lot of physical activity to help that mom. Right. And you're usually on a one to one on L&D a lot of times. So that was my prejudice of ohh, my gosh, I'm gonna have to, you know, really work to help this patient do what they need to do. And then you give report. And then while you're giving report, somebody's rolling their eyes, right? And we're doing it not at bedside, because sometimes you did it bedside. Sometimes you do it in the nurse's pit or, you know, wherever we happen to be to give report should be at bedside, right. But how you describe your patient when you're giving report is important and part of obesity sensitivity training is describing your patient. So when we give report, we give report 42-year-old male with diabetes Type 2 admitted for XYZ. Do you give report like that or do you report? I've got a 42-year-old diabetic male admitted for XYZ. And then you can read the next one and the next one. And the reason why this is important is because in one statement you are identifying a patient with a disease. And in the other type of statement you are identifying a problem or a disease. You're not identifying a patient. They're no longer a person. And nurses are great about disassociating, right? Ohh wrong button. I'm so sorry. You'd think I would be better with

technology? So how would you give report on a 20-year-old male patient with a BMI 42? And just kind of look at it. And read those items that replace obesity with the word fat. Right. Changes your perspective just a tiny little bit you're giving report to your person, to your other person, or even when you're talking about a patient and writing down your notes on your little SBAR sheet. For that you have for when you do shift change, right. Is there anybody here today? Please raise your hand if you would be OK with having your nurse or your healthcare provider describe you like line #3. I wouldn't come back and you can bet your baby that that would be probably a nice little ICE comment to Patient Advocacy, right? How you describe a patient matters. So how does white weight bias hurt our patients? There is a there's a great institution, but there I think it's the University of Connecticut, it's called Yukon Rudd Center. They have this amazing 60 some odd page PDF that's on Relias by the way as a link for you to do your sensitivity training and it goes, it talks in depth about weight bias and how it hurts our patients. In that study, 40 to 60% of patients have been insulted. Felt shamed or degraded by their health care providers simply because of their weight. If you are stuck in a bed in an inpatient unit and your nurse comes and they treat you as sub human because of your weight. That's can affect your care. We know that from Florence Nightingale environment and effects. How you heal, how you recuperate. Your mental mindset is just as important as the drugs we give the patient, right? Though 40 to 60%. That was amazing to me. The other issue that we have is when patients come in, providers don't have a lot of time, right? We are we have very, very narrow time frames of when we can see patients and we're not like the civilian sector where you come in and they have notices posted on the wall saying you were able to see your provider for this thing today. And if you need to talk about anything else, you have to make another appointment, right? No our PCMH model is when the patient comes in, you take care of the entire patient, address. All of the concerns that they have as much and as fully as you can. And it's broad, ordinary as a scope as you feel is appropriate, right? So if a patient comes in, you've seen them two, three times this year. You've had this discussion about weight loss. As you as a provider. You're gonna kind of feel a little bit like your failed right? Cause the patient didn't lose any weight. Well, nobody likes to feel that way and I don't know about you, but. How many? How many providers do you know? Probably disassociate that just a tiny little bit and go well, how come we haven't lost any weight? Does anybody think that's a nice way to phrase that to a patient who is struggling with weight loss or being overweight? Or obese? It's not so part of the sensitivity training is learning how to be more sensitive about how you phrase things. So instead of immediately jumping into that, you could pose the question to your patient. So are you comfortable if we discuss your weight today? Patient can say no. OK. Is it something that you maybe wanna talk at another visit when there's more time? No, not really. OK. Now you really, I mean, I hate to say off the hook, but you're a little bit off the hook at this point, and now you address the other concerns. If the patient says yes, you don't immediately jump down their throat. We'll have you gone to the Armed Forces Wellness Center. Sorry I have to stop myself from saying the Army Wellness Center. It's now the armed Forces Wellness Center. Have you talked to nutrition? Have you gone to behavioral health to find out? You know, do you have snacking habits like the bariatric program coordinator at 9:00 o'clock at night that are unhealthy choices to make. Do you stressors in your life? Do you have challenges? Maybe you have a special needs child at home and you don't have time to grocery shop and make healthier choices necessarily, because that takes time. Right. Or maybe there's a financial component they can't afford to buy organic or all of the nicer cuts of meats, the leaner cuts of meats, the better, healthier food, right? So those are all take those are all things that sort of are underlying problems with this with health care providers, we are focused on fixing a problem because we're fixers, we like to fix things your. Your potassium is low because we gave you Lasix. Ohh, we can fix that. There's an order for that. We can fix it. We'll give you some. We'll give you some K [potassium], right? We like to fix things and obesity is not a quick fix thing. It took them a very long time to get to that point in their life. It's going to

take them a very long time to make changes. Right I don't know about you. But change is hard, at least for me. The other thing is healthcare providers may not be comfortable, they don't want to offend their patients, they don't wanna get that ICE complete, that somebody was insensitive, right. Even though they may not have thought they were being insensitive. Again as patient perspective and if they're already kind of cringing because the last provider was mean to them or said a comment, that really hurt them or offended them, they're going to be more sensitive to how you speak to them. So it kinda feels like walking on eggshells. So part of this is helping providers trying to figure out how do we have those conversations and one of them is ask for permission. We asked for permission to touch a patient before we do a breast exam, right? We asked permission. I'm gonna touch your leg here as we do a pap smear, I'm going to put my hand on your back when you're doing a rectal exam, ask permission. Can we talk about your weight today? Are you comfortable with that? The other thing is I've worked in Family Medicine. I've worked in L&D and now I work in General Surgery. General surgery is the 1st place where we have a private place to weigh patients. How many of you have a private place to weigh a patient? Where do you work? Ah, OK, yes. Anybody else do you have a sort of private place to weigh? A patient where nobody else can see what they're weight is? Where do you work? Occupational health. I don't. But plastic surgery? Yes. Plastic surgery actually moved their scale into an exam room so that a patient could have some privacy and dignity when they're getting their weight. It's little things like this making sure you have a chair that's wide enough. To fit your patient who's coming in, right? You hear about it on airplanes all the time. You know, anybody a big fan of, like, the strongest man competitions. There's a gentleman called Eddie Hall who's the strongest man who won in England. I think a few years back and he can't fit in a normal airplane seat. He has to buy 2 and get the extender belts. Right. Now he is a professional powerlifter. Think about somebody who's just the average person who can't fit into an exam chair in an office. That's already demoralizing right there, and they're already being put in a vulnerable position because they're gonna have somebody come here and do a head to toe exam. Right. So do you have the right equipment in your area? You should because we just had we accreditation last year and I walked through the different departments that are patients typically go through to include pharmacy, lab, radiology. MRI, interventional radiology, primary care clinics, DOAOS. Pre-op, post-op, surgical services clinic. Even the ORs. We are bariatric centric in our hospital we have equipment that will help and hold our patient. This is also difficult because insurance companies create barriers. And they make you jump through incredible hoops and extend the time frames. In order to get bariatric surgery, if that's what the patient would like or patients can't afford the copays for all those multiple visits to a nutritionist or to the behavioral health provider. Or to see a personal trainer, we're a little bit lucky here on military bases because all of those services don't cost the service member or their family members or our retirees or dependence a penny. Nobody pays anything when they go to the Armed Forces Wellness Center. Nobody has to pay a copay for their nutrition visit. With Belinda Steinacker, nobody has to pay a copay when they go see any of our behavioral health professionals. So Doctor Snyder, Doctor Lesniak ohh, my gosh and Doctor Siegel. So insurance companies also kind of send a subconscious message. That this it's not really important. It's not really something that we wanna pay for. Which is really funny because bariatric surgery. Increases your mortality. More telling. No, sorry, wrong way. Other way it increased, it decreases your risk of comorbidities and it helps you live longer. OK. And I think those are all the things that we've got. So why discuss your offer? Bariatric surgery referrals? Who thinks bariatric surgeries the easy way out? And don't be shy. The cameras up here, nobody's gonna see. Raise your hand. So, oh, I heard somebody say no surgery is easy, and you're right. But there is still that bias out there that they're taking the easy way out, right. Well, you're gonna have bariatric surgery. So you're gonna lose 20 pounds in a month. That's cheating. No, it's not. If we cut cancer out in a surgery versus just treating you with. Chemotherapy we've just expedited. You were recovery or transition to being cancer free or in

remission. So why is the opinion that bariatric surgeries cheating when the objective is to get to a place where you have better health? And better lifestyle, right. So bariatric surgery is both effective and durable. So meaning most patients can achieve long term weight loss. And I think the five year for gastric sleeve and gastric bypass, I think the five year results is 20-30%. Of your excess body weight is still off at the five-year mark, which is incredible. It it's not a, it's not like, Oh my gosh, they lost you know, 50% of their weight. They may do that initially, but again they have lifelong habits and patterns and behavioral actions that they are fighting against to get over to get to where they need to be. So bariatric surgery is a tool. It's not a panacea, it doesn't fix everything. It's simply another tool in our toolbox that we can offer patient. Bariatric surgery, after offers remission of type 2 diabetes, it has significant protective effects against cardiovascular disease and interventional effects on hypertension, high cholesterol. Fatty liver disease and sleep apnea. Now there are some interesting studies. Even if patients gain the weight back. They may not have a recurrence of their hypertension or their diabetes after surgery, which I think is really interesting because you would think ohh well if they're gaining the weight back there, get those things back because that happens when you don't have bariatric surgery and you have normal anatomy, right? We see that with type 2 diabetics all the time. But post-surgery. Those things go away, and they may never come back again. They may stay in remission, 30% overall mortality benefit after bariatric surgery, you've just increased your life expectancy. And the study over 3.6 million patients, risk of dying from bariatric surgery less than 1%. It's a pretty gosh darn safe surgery majority of the time. It's laparoscopic, so no big cuts, no big wounds to have to worry about infection. There are some complications and we'll talk about that a little later, but overall, it's pretty safe surgery. Uh, morbidly obese patients have bariatric surgery, are 89% less likely to die over any five year period, compared to those who are. Not having bariatric surgery. OK, so referrals can be placed through MHS Genesis via bariatric medicine and surgery. If you have any questions about this or wanna try to figure it out or want more information, please reach out to me. I'm always happy to share resources. I'm happy to come trucking down to your place and Play tour guide Barbie in the hospital and do presentations and meet your people and tell you whatever you need to know. I keep hitting the wrong button Jess. I'm so sorry. So this is our bariatric team, Doctor Porta. First name is actually Christopher, but he goes by his middle name, Rees, and he is our bariatric chief. He used to be one of the residents here. So he did his residency here at Madigan. And then he went still active duty to William Beaumont and managed their metabolic and bariatric program there through MBSAQIP. And then he exited them into military. And he is now a civilian provider here at Madigan running the program. He also is on the work group with DHA. Working with them about the whole mandate that they have with wanting to institute and MBSAQIP accreditation in other MTF. Doctor Bingham is active duty and so is Doctor Shawhan and Doctor Eggebroten is sort of an institution here. He's been here for a very long time and he is a super cool chill likes to go skiing in Colorado, kind of dude. We have a nurse coordinator specifically and only for the bariatric program which is very nice and that is Miss Laura Sage, program coordinator and clinical reviewer is me behavioral health. I already told you about our physicians there and for nutrition. We do have Belinda Steinacker. We also have a physician assistant inside general surgery who sees patients preop, postop and sometimes as a surgical assist. But that's sort of rare here and there. And then Doctor Teresa Bruder is in charge of the Armed Forces Wellness Center, and she is always happy to see any of your patients, whether they want to have surgery or if they're just looking to get healthier. Yeah, the right button this time. See, you can't teach an old dog new tricks. Preoperative outpatient care needs so pretty much there is a bunch of stuff that you have to check off the box. For Family Medicine, so Cardinal, Swan, Jay, Eagle, Falcon and also our outlying clinics at South Sound, Puyallup, and McChord. We do an outreach once a year, Doctor Porta goes out, provides updates on the bariatric surgery program, requirements, follow-ups so on and so forth goes total through the song and dance. I then also follow up

subsequently with those clinics and provide a sort of all inclusive folder because I don't know about you, but sometimes my computer just doesn't wanna let me on SharePoint to get the information I need and I just wanna put in some lab orders please. So I have these sort of cheat code books. I always call it like the nurses pit or the doctor's pit. But like the nurse center or the center of the clinic, where it's really easily accessible and it's a red folder, it says bariatric patient care. Here's my business card in it. It has instructions on where to place the referral and what the referral needs in order to be approved. It also has some little flags about. Ohh make sure they HEDIS measures are up to date right? If they're women, they've had a mammogram and pap. If they're over the age of 45, check to see if they had colonoscopy, so on and so forth, yadda, yadda, yadda. And because we're going to want to have those items in place already and then just, you know, why are they wanting a referral for bariatric surgery? Well, they've been yoyo dieting for the past 10 years. They've tried [unknown], they've tried behavioral therapy, they've tried hypnosis. They've tried the wonder drugs that the supplement store, like Hydroxycut y'all remember that or might just aging myself here, right. But they still can't lose the weight, and we now know that there is a genetic component to weight loss, right? I think there is a famous TikTok thing about a woman saying that you know my ancestors were Scottish and they were like ohh don't worry Lassie. We'll keep you fat and plump while the while the English are coming to take your stuff right and there is some truth to that. You can have genetic markers I had. I'm following Colonel Yauger. I gotta keep you guys awake here. And there is a genetic component to it, and you might have the marker that you do carry more body fat. Right. We all kind of have a set point where a body likes to sit and for some people that's higher and for some people it's lower. So if they are looking to have bariatric surgery, the first thing to do is go through the book or go online and look at the referral documents and see what do we need to have. Now if you just put down bariatric surgery, patient wants to do it, we're gonna kick that back. We need just a little more information. OK. So please follow the instructions because we wanna say yes, we like yes. You can read this slide. Let them know that if they choose to do this referral and they get approved, they're not committing to surgery because that's kind of scary for a lot of people, right? I don't know about you, but I love a propofol nap. When they told me I could have my colonoscopy 45. Ohh yes. Please let me get a nap in. But for other patients, this is a really scary thing, right? To be put under. To go under the knife, right? So let them know this is for you and if like last minute you've got surgery scheduled in two days and you're like, no, no, not doing it. I'm done. No, that's OK. You don't have to have surgery, but you can still stay on the you can still use all the things. You can still go to behavioral health. You can still do nutrition. This is about supporting the patient in their decision to get better. OK, so referral to General Surgery, discuss weight loss surgery options. If you don't know what to do or you're just like this is just too much work. Obviously it's Christine, an e-mail. Tell me what to do, I'll put the referral in for you. It's not my job, but I'll do it for you. OK. Now, if I start getting like 15 of these a day, yeah, we're nixing that right in in the bud. No, but like, onesies or twosies. If you're just, like, overload and you're just like, I don't know what to do, and I can't find the book. And I can't get on SharePoint. Yeah, definitely. I'll help you out. Madigan Army Medical Center, bariatric pathway so. The referral goes then. Now what? It does not go to the health referral systems where they have to wait seven to 10 days. Hey, it actually comes to one of our people inside general surgery. Doesn't really go to managed care at all. I think it actually comes directly to like Jackie or one of our surgeons Doctor Martin. Alright, who it is, but it comes directly to us and so we go through and we vet and we're like yay and then they get an e-mail saying, hey, go watch this orientation video. An orientation video basically is going to go over the next slides that we have, and here's the surgeries that we offer here at Madigan. Here's the benefits. Here's the risks. Here's Postop plan and care. And then once they see the video, there's a little button there for them to click. They print the certificate they sign in, and then they go see our case manager. And that's kind of the beginning of their pathway. We do make them sign a contract. OK. Because we

want them to be committed. But a lot of what the contract says is don't be a jerk to our providers, we're here to help you, right? Don't be mean to us. And don't be mean to other bariatric patients. Everybody's on a different journey. Right, be nice. Just be nice, but it's 2 pages. But that's essentially the whole thing in a nutshell. Intake or group QA sessions. So we used to have every patient come in to our general surgery clinic and once they've seen Laura Sage, they do an intake appointment to go over everything in the orientation video. We found that this was the page that just checking a box. They're like I've already watched the video. Why do I have to listen to a doctor? Tell me everything again. Right. So we thought, well, how do we increase access to care for our clinic. Ding, Ding, Ding, right. Because that's always something that we're looking at. But still get the patients what they need and let them feel supported and then get them the information that they want. If they have questions. So in January of this year, we switched over to a group session. And it's just an educational session. We getting RVU's or anything like that. It's not a billing code, but they actually get a. If not, zoom it through Adobe Connect I think. But it's some kind of thing where they get e-mail they don't have to be linked into Genesis. They just get an e-mail in their regular e-mail that says click this link to join the group. They click the link, they can talk to a general surgeon for an hour. In a group setting in January, we had several people show up. February I had zero. March I had one. We changed that to a virtual so they could ask whatever question that they wanted from one of our surgeons. So patients did not find value in that intake appointment because they've already gone to bariatric orientation online and they've already talked to the case manager. So streamlining care, kill two birds with one stone, with that one. We still do offer it every month. We just end up tweaking it however we need it. So if the patients there's no patience, then we just cancel it. Or if there's only one or two, we changed those to virtuals with one of the bariatric surgeons. Umm, there is no mandatory have to go to support group anymore. As again, patients were checking a box. You make them go to support group. You know what they do? They sit there. Space out. Drink some water. Wait to leave. Look at their watch a lot. Right. So we got rid of that mandate. You don't have to go to support group. We encourage it. We want you to go. We think you'll find some benefit to it. And support group has not only both patients who are waiting to have surgery, but we invite patients who have had surgery to come back and speak to their experiences. Ohh yeah, dumping syndrome real. You don't wanna do it. Right. Follow your food and drink advancement plan. If you don't, you will suffer. OK, so having those real life patient experiences in those small groups because it's about 10-15 people and it's led by a certified support group leader. I only do it once in a while because nobody wants to listen to me talk. It's yeah. And Laura Sage usually runs that group. But umm, but we found it very beneficial for those patients who are looking at surgery. They're super excited. They think it's gonna be really easy and like ohh not as easy as I thought. Maybe it was going be. Oh, but I'm special and different, so the role play to me, those are the ones that eat cookies right afterwards and then have dumping syndrome. They only do it like two or three times. It's pretty. It's pretty self-limiting process. I shouldn't laugh, right? That's not very sensitive of me. So. Support groups mandatory. Yes, they have to go to AWC meet and greet. Yes, they have to meet with a nutritionist. Yes, they have to have a behavioral health screening. Yes, they have to have a sleep study, right? We know we have CRNA's in here Colonel Yauger amongst others. You're not oxygenated, you're not healing. Not the optimal rate. Do you think they like their CPAPs? Whoa. Ohh so we have a lot of noncompliance with CPAPs, but you can't force the force to drink when you take it to water. But at least we did our due diligence and says, hey, you really do need a CPAP. Well, OK. But I'm not gonna use it. OK, your choice. But at least anesthesia knows that way. When they go in for their pre-anesthesia check out and we can adjust accordingly there. So it takes up to three months to get through the pathway. And that's doing all of these things. And it just depends on how committed the patient is to doing it. One of the caveats that we have is you are not allowed to gain weight while you're on the pathway. You don't have to lose any. We'd like you to, we

definitely like you to lose some weight because you know you're getting all these classes to teach you how to change your behavior. And change your relationship with food and drink. Umm, but we don't require it as long as you don't gain weight on the pathway, you're good. And you don't get to skip things. You have to do these things now if you saw if you saw nutrition right before the pathway. Yeah. OK. We'd still like you to see them again. Because now we're going to talk about bariatric nutrition, preop, postop. There's also some labs. Not everybody gets an EGD prior to their bariatric surgery. Now on the civilian side, the network side. They like to do this. Why? Well, number one, you know what you get right. You're gonna see exactly what the anatomy is, but it's kind of a grey area. Civilians wanna make money? There's a way to generate revenue and housing it in the aspect of whether you have bariatric surgery, we know what's going on. If they don't have a hiatal hernia. They have no history of having any GI issues. They really don't need any good, right? The only time we would do it if somebody has chronic GERD because we'd be concerned about Barretts or if they're having serious GI issues, you know, do they have H pylori? Do they already have ulcers? Is there some other mechanism going on that we need to be aware of before we start going in there and cutting away? For patients who have gallbladder issues, they can take that out at the same time that they do your surgery. If they feel it's appropriate. So you get one surgery, 1 anesthesia event instead of having to come back in and get your gallbladder taken out. If that's an issue. Uh, no nicotine. No nicotine for 12 months. We will test you if we think you are smoking. OK, now what's really interesting about MBSAQIP's guidance is they don't take into account weed. Marijuana, or vaping, or hookah, or cigars, which blows my mind. But if you were doing any of those things and you were doing them nicotine free. All right, per MBSAQIP's standards. Now was the surgeon going to have surgery on you? I don't know. That's their call. Is the anesthetist gonna clear you for surgery? Don't know. That's their call. But if you're patient is using marijuana, CBTC, or any of those fun things that we as federal employees are not allowed to in vibe in? Anesthesia needs to know. As does your immediate post-op care. providers, because that's going to interfere with pain and how you manage their pain, right? There is a COVID screening a day or two before. That's just kind of standard practice now and yeah, you can't be pregnant and have bariatric surgery. You. I hear giggles. I hear giggles. But there's a reason why it's on the slide. OK. And we'll go into that a little bit more when we talk about the end part of this. OK. Jess what time am I on here? I have 11 minutes, 12 minutes. OK, I'm gonna talk. Alright, I'm going to talk really fast because you guys can read the slides, right? OK, three. Most common bariatric surgeries. Sleeve gastrectomy, also called the gastric sleeve gastric bypass also called Roux-en-Y, Roux-en-Y gastric bypass or those cute little acronyms that you see up there? And both of these surgeries produce similar weight loss patterns at the five year post OP Mark, which is about 60% of excess weight. I have seen it be 20. It just depends on the patient and. Where they live. Adjustable gastric banding. We don't do this at Madigan. This is kind of, I mean, some people still offer it, but it's there's complications with it. It doesn't really have good long term weight loss. It's not really a great option. So we just don't do it here. However, we will manage it. So we will fill, we will empty it. We'll even take it out. OK. And we actually do conversions where patients get their band taken out and they get a sleeve or Roux-en-Y instead. Why do nurses need education on metabolic and bariatric surgery? Because more and more patients are having it. OK. UM as a woman? I worry about hair loss. Because I am vain, right? I also worry about my skin getting thin and dry. Well, is that a thyroid problem or is it a malnutrition problem? Because I bariatric surgery six years ago. And if you're patient, doesn't tell you that they've had bariatric surgery or if you don't know about it, you were chasing horses when you need to be chasing zebras. Right. It just makes more sense. OK. Sleeve gastrectomy, we cut off a bunch of your stomach and you were left with something that looks like a banana. Or a hot dog tube you will never forget. Now what? A sleeve gastrectomy is gonna look like internally? It's a hot dog tube. Or it's a banana. And what this does is this is a restrictive procedure so the patient

can eat less food if they eat more. They're not gonna like it. They're gonna have that impending doom kind of feeling stuck in their chest. Can't get it passed. Sort of feeling right. This is restrictive and when you remove the stomach, the very top part of the fundus and rolling down is a is where you're. I always hate this word because I wanna say gremlin, but it's ghrelin. That's where all of your sensors are. Not all of them, but a good portion of them. And so when they exercise the stomach, they get, they take away a lot of those patients, think they never come back. That's not true. But what this does is it gives the initial boost and help of that satiation feeling. So they're not hungry like they used to be after the surgery. OK, Roux-en-Y gastric bypass is considered the gold standard. This has the best results for postop weight loss in the immediate and the long term. Time frames, but your stomach is the size of 1 ounce. You cannot eat a lot. OK, with both of these surgeries, we do not recommend that you eat and drink together at the same time. In fact, we have a bariatric pathway book and a nutrition booklet specifically stating these two points because you're gonna have a bad time as a patient. OK. It bypasses about the first, third or so of your small intestines, so this is also a malabsorptive procedure, not just restrictive. So the patients getting less food and the patient is absorbing less. So this patient is going to have to have lifelong supplementation and lifelong monitoring of their nutrients. Adjustable gastric band, this is what it looks like and when they take it out, they take out that little ring and they take out the tubing. It makes up about less than 1% of surgeries actually cause nobody likes it anymore because they figured out really doesn't work. Common post-op complications, so short term long term. Biggest thing if you're taking care of bariatric patient after surgery and you get an order for an NG tube. Warning, warning, warning. Danger. Will Robinson, OK. Wow. Oh my God. I'm old. Nobody got that joke. Ohh, I got one person raising their hand. Thank ohh two. Thank you 3, 4. Thank you very much. If you're getting an NG tube, you really want to be careful because you have rewired there anatomy, cut things away, taking things out, stapled it back together. You do not wanna be the person that perfs, this poor patient. OK. Also things like, you know, don't drink anything with bubbles. No alcohol. OK. In patient care needs, this is the lap surgery. So you've got five to six incisions. They're all pretty small. The biggest one you have is going to be like around the belly button and that's where they do a lot of the movement. That's where most of your bruising and pain is. They occasionally will tack things up inside, and it's just like 1 little tack, and sometimes they feel an internal pinch there as well. Moderate pain, mild to moderate pain is expected. They do tap blocks to help with pain management. Narcotic prescribed prescribing is very limited after this, and if you are doing gastric sleeve that can actually be the same day situation. If you meet criteria. So you come in, have your same day, sleeve you go home that night, you have an appointment to come back in the next day for us to monitor you give you fluids and give you lovenox. OK. Additionally, staff should closely monitor the following. Especially H&H if they're not feeling good, they're getting tachy[cardic]. Right. What's your H&H? Are they spewing out blood or pooping it? Ooh, we might have a GI bleed. Bariatric protocol. This is developed with anesthesia here at Madigan, and it meets the ASMBS guidelines and industry sort of expected. Markers. Day surgery. This is with patient. Gonna get post op day one post-op day two. This should be posted somewhere on 7 North and 6 North. I know it's in your folders your bariatric folders. This should also be in same day. Surgical services in there holding area and it should be also posted up somewhere in DOAOS. OK and it's just a reminder it's just a reminder. So the nurse coming on shift on 6N or 7N. Oh yeah. This is kind of what I can expect. To have to do without digging in the patients chart and reading the ungodly mess that is MHS Genesis, MAR. Going home long term, follow-up care need, no lifting if they need to have con leave. We don't do active duty. We don't do kids under the age of 18, but if they need Con leave for their active duty spouse to come help them, we do write letters for that, for the patient themselves. Whether it's the sleeve or the Roux-en-Y it's two weeks. Have convalescence and then two more weeks of light duty with them. Having free access to fluids, OK. We do like to see the patients sometime between one to three weeks after surgery. We want them to follow up with

her primary care one month after that and then we want to see the patient at three, nine and 12 for bariatric follow up just to make sure things are going swimmingly for them. We also do want them to follow up with nutrition and the reason why we want them to go see their PCM is a lot of times they don't need to, they need to titrate their diabetes medication, they need to titrate their hypertension medication. OK. If they are on a PAP of any kind, A, B, or C? They we don't offer reevaluation as they're at least nine months post-op, and then they get reevaluated and maybe they don't have to have a [a, b, or c] pap anymore. And again, if there were never using it in the 1st place, you don't have to worry about that. But you still want to get them re-evaluated to find out should they be OK? Uh complications anastomotic staple line leaks. Umm basically where you see these lovely little dot, dot, dot, dots, we can't have some leakage there. OK, you can't have strictures stenosis. Everybody heals differently. Some people create a lot of scar tissue. Some people don't. When they do have issues with that, it's usually where they've connected the two pieces back together. And as it heals up, it just gets tight. And that's usually addressed with EGD dilation. Typically there can be internal hernias. It's a mesenteric defect. or Peterson's defect if you know what those are. UM GERD, especially after sleeve gastrectomy is can be common and up to 20% of patients experienced GERD pretty, pretty unpleasantly. And dumping syndrome. We already talked about that just a little bit. Malnutrition, alcohol abuse. You are much more sensitive to alcohol. A little bit goes a long way now. You are now a ohh wait, I can't do that. I'm at work. I can't say that so. But like it's gonna say you're a lightweight, but I don't think that's appropriate. And pregnancy, we want you to avoid pregnancy for at least 12 to 18 months. We prefer 18 months because otherwise why did you just have surgery? Because you're gonna gain all the weight back and you're stressing all of the surgical sites that you've just got put in you so. And we recommend that you make a conversation with your OBGYN about that to find something that might be non-oral contraceptive because you don't digest and absorb things the same way even with a sleeve. OK, so Anastomotic staple line leak up to 10% of sleeves and bypasses, but it's typically lower. We already talked about a few of these things. Typically we wanna do bowel rest if it turns out that they do a CT and they do see a leak, they will go back in either through interventional radiology or back to the OR to drain that and assess that you cleaned up and fixed up again, OK. How much time do you, Jess? So fast. I've talked to two minutes, OK, complications, strictures. Chest pain. They puck everything back up. They can't keep it down. So we do an EGD a lot of times they can just fix it with a balloon. OK. Diet balloon dilation with the GD and usually takes more than one sometimes. And every now and then we have to put in a stent, but that's pretty rare from what I've seen from the chart reviews that I've done. Uh, marginal ulcers. So these occur right where the anastomosis is, where they've reconnected either your small intestines or at the site of your in where they cut things off and staple it back together again. Uh, a lot of times. It's because the patients having caffeine or nicotine or they really like riding the Motrin and they're gobbling down ibuprofen, which they need to avoid after bariatric surgery and pretty much for the rest of their life. OK. And internal hernias, we talked about Peterson's defect. We talked about mesentery defects. CT scans could miss it if the patients really having trouble. They'll do a diagnostic lab. And if it needs to, they'll fix it. Malnutrition more common with your Roux-en-Y gastric bypass because it's both malabsorptive and restrictive. This is where you get your hair loss. Bone density decreases, your skin gets really thin, and you're looking older than you think you should. You feel like garbage because you're tired all the time, right? Umm. And this is where we. I think we only have like maybe one or two patients in the past couple of years we've had to send them to the 6th floor for IV's for iron and I think these patients are already low before surgery to begin with anecdotally. OK, dumping syndrome early. This happens when your patients decide ohh the rules don't apply to me. I'm gonna have some bread or pasta. Instead of having that high protein diet. Umm it's a self-limiting situation cause the patients only do it once or twice because it's really awful. Yeah. Sweating, flushing, Lightheadedness, tachycardia, palpitations, cold sweats. And you want to

lie down, but that doesn't feel good, so you stand up. But that doesn't feel good either. And you just can't get comfortable. Abdominal pain, cramping. Uh blowouts. You might just poop it all out all at once, and it'll be really unpleasant. But once all those things happen, you feel better, right? Patients will still sometimes come to the emergency room for this because they forget about dumping syndrome and with all of the education that they get, it's a lot of information to assimilate all at once so. One minute alcohol abuse we already talked about alcohol abuse. It takes fewer drinks to get to the same intoxication point as before surgery. And so we really do caution patients to not drink alcohol after bariatric surgery, especially for Roux-en-Y gastric bypass. Pregnancy talked about this earlier. Non-oral contraceptive because we don't want you to get pregnant. Right? Why have the surgery now if you are. We have had patients where they're like they're halfway through the pathway. They wanna get pregnant and they're like, well, do you wanna get pregnant or do you wanna wait 12 to 18 months because you will have complications. Fetal development might be compromised because you're not getting the nutrition that you need and you haven't gotten back up to a baseline of where you need to be after surgery. So this is definitely a conversation to have. OK, it dies. Can you can you? Thank you. Hey, so key takeaways. Lifelong monitoring patients at the one year mark and annually thereafter can see either a bariatric surgeon or their primary care for their annual follow up. I review all the chart notes I dig in there I go to JLV. I look at VA to dig all the information out to find out how these patients are doing. If providers are not comfortable, they can always of course defer the patient to general surgery and we would be happy to see them for that. But really at the one year mark, they're pretty good to go. By the time they see you and you just got to kind of check off the blocks. Where we've got the red folder that tells you what labs to draw on, what to look for. Questions. Yes. So prior to COVID we were having. Ohh I'd 150, 180, 200 a year. With COVID, it's not just COVID, it's also the restrictions that we have with the OR. Think right now, there's only six or seven OR rooms which projected to get down to four, but that's a projection, not an actual fact. So don't you know, oh, my God, the sky is falling. Let's not go there. So right now it's 6 to 7 and the limitation is of course surg techs. Operating room nurses, pre and post-op nurses and nurses at the bedside. OK, so right now I think we're doing about 5-5 to 8. A month, a month and 150 to 200 is per year prior to COVID. Sorry. Thank you for the clarification, Jess. Yes, Colonel. So I prefer hot Cheetos. Ohh yes. Do you dip them in sour cream and Nacho cheese sauce and ranch. OK, OK. My question is with COVID-19 pandemic you see an increase in the incidence of obese patient population. So that is not something that we tracked because we are still kind of a separate entity from the primary care clinics, but that would be a good research project if anybody wanted to see it. What we did see though is that we had a higher instances of occurrences with our surgeries because of the COVID pandemic and the restrictions to the OR where you could only take trauma cases or urgent cases or cancer cases. All other cases were very piece meal and so you took back those patients that were the sickest who were wanting bariatric surgery. So you're already stacking the deck against yourself when you're taking the patients back versus having the shotgun of a more randomized patient group. Thank you. Yes. I'm currently at the primary Family Medicine clinic in Bremerton. Hey, we love you. Say hi to Kaylee Kang Geyser for Keiser. Keiser for me. Yes. So I see my patients in the initial? Talk through the packet. Play. Thought that look at packet look at all it's. And go never come back. Right, right. In. Order. Do you like? Do you any recommendations for how to keep patients sort of? Ah, you know program. So again. This is a life altering surgery, just like having a baby. Whether it's C-section or vaginal. Having hysterectomy, having a partial lung. Losing a bit of liver, donating a kidney because they're all life altering surgeries. Bariatric is no different, so it's not our job to gatekeep saying no, you can't have surgery or to kind of Oh yes, come have surgery. Here's Candy, little boy. Yeah. We don't want to do that. The patients who we wanna have surgery we want them to have surgery. I'm going to get in trouble for this. You're gonna send me the EO, aren't you? Please don't send me the EO. I've already been to all the classes. I'm sorry. There was

somebody in the back before you, yes. Uh, fantastic question. So she wants to know, I think, BMI, where do you have to be in order to qualify for surgery? So ASMBS, which is the American Society. Of surgeons for metabolic and bariatric surgery. They and IFSO, which is sort of the international group that. Takes care of bariatric surgery, focuses on that they've just released new guidance, and DHA is trying to catch up with that. And so is Tricare insurance coverage. So it used to be BMI 30 with uncontrolled diabetes or unsuccessful weight loss. It was 35 BMI with additional comorbidities and unsuccessful weight loss. So you either have hypertension, you had to OSA so on and so forth and 40 and above you didn't have to have comorbidities. You could join the bariatric pathway. The new guidance is 30 if they if you're provider feels like it's more intended. There's no more that restriction, and if you are of Asian descent, that BMI drops down to 27. Because we tend to carry more. Belly fat. And we have in higher incidence of higher, I believe hypertension, high cholesterol and diabetes. More so and worse than the other ethnicities, because that's my that's my sort of glancing understanding before I go to the conference that will be held in June to get more information on that. Yes, ma'am. If you want to question was more about barriers to the patient centeredness of care and the fact that the packet is so extensive that they have to come back and forth to Madigan 1000 times, was it about like what you might be able to do locally or how to support them in that program because of the distance? Can I speak to that? Yeah. So we have a sort of symbiotic relationship with Bremerton and also Naval Hospital Everett and Alaska and Colorado. So whatever components that they can complete at their MTF that they have available, they can do it there I think. And please correct me if I'm wrong. What you're alluding to is when the patient comes in and they see the nurse and the nurse goes and gives this big, like, old school telephone packet of stuff. They're like, I'm not. It's a visual. Sort of. That's too much work, right? So that might be something that is a presentation thing that you guys could work on as a QI/PI. I you could also have the patient. I mean, if we want to share our orientation video with you, we're happy to do so. If that's something that you want to incorporate, I would talk to Ms. [unknown name] about it or De La Torre, Therese De La Torre and Lieutenant Commander Deluco Weststraight. And see if that's something. Bring that concern up to see if that's, you know, sort of breaking the patients out, that it's oh, my God, it's too much work, but it is a lot of work, which is why it's not a cop out. Anything else? Thank you so much for your attention. I really appreciate it and thank you for laughing at all my jokes.

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MAJ Samosorn can you go ahead, take yourself off mute real quick for me and just do a mic check. Thank you. Yes. Can you hear me? One second I've gotta do real quick. Before I introduce our closing speaker, I'd like to take a moment to recognize the two other members of our Conference planning Committee, Lieutenant Nate Anderson and Lieutenant Gillian Lee, and I have been working since last August to ensure this year's conference became reality. So Lieutenant Anderson and Lieutenant Lee please stand and if we could also give them round applause. OK, ma'am, can you try one more time to just do a quick mic check for me will begin momentarily. She is a virtual Yes. Are you able to hear me? presenter. Live. Yes, we can hear you loud and clear. Thank you, ma'am. Just one second. Hey. Is this one on? You're good. Thank you. It is now my privilege to introduce our final speaker. Major Angela Samosorn is a nurse scientist currently stationed at the US Army Institute of Surgical Research at Fort Sam Houston, TX. Her research interests are many, but the primary interest is the intersection of education, technology, and healthcare in far forward, and austere environments. Major Samosorn does not have much free time because her high school age daughter is living her best life through sports and band, but she does prioritize reading for enjoyment daily. She'll be joining us virtually today. Please help me welcome Major Angela Samosorn.

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Hi, good afternoon. I just want to make sure, can you give me a thumbs up that you all can hear me? We're good here, ma'am. OK, perfect. So thank you. I know I'm like the end and in my in my heart, I'm gonna believe that you'll save the best for last. I know it's difficult because I'm virtual. I can't see the whites of your eyeballs. So again, in my heart I am going to believe that you are so engrossed in all my slides paying all sorts of attention. I'm gonna talk about some of the future research focus areas for AMEDD capabilities, thinking about that future operating environment. Next slide, please. This is me. I am currently stationed at the Army Institute of Surgical Research. You can see I'm dual hatted. I'm actually the chief of clinical research support and also the Chief of nursing research here at the ISR. And for those of you who don't know, we are located inside and next to BAMC at Fort Sam. Next slide please. I do not have anything to disclose. These are all my own views. Next slide. So today we're really going to talk about a bigger, broader view of military medical research. I think it's something that isn't well known outside of the bubble of those of us who do conduct research, especially in federal labs, we'll cover how things, how things change or how change impacts the things that we research, what entities are involved in driving change, how we're thinking about the future operating environment within the constraints of our current capabilities and capacities and how gaps can influence military medical research. There are so many pieces to this and I'm not gonna go deeply into any of them, but I'm gonna give you kind of this broad overview and then there is some resources that you can kind of dig into for the parts that you may or may be interested in in the future. Colonel Yauger's presentation teed me up beautifully and he didn't even know it. I didn't know it. These slides were due quite a while ago, so I could not have asked for anything better from his presentation. So some of the things that he talked about with our. That evolving environment I'm gonna give some context to those things. Next slide. So a little bit about me, I like odd trivia, fun facts and things like that. So I'll start with an fun fact I've been a part of the AMEDD in every like option that the AMEDD has for serving. So I started as a reserve medic right out of high school. From there I did an ROTC scholarship and got my BSN from Viterbo University and Lacrosse, Wisconsin came on active duty as a new Lieutenant. And then I served on active duty from 2001 to 2006. And at that point, I went into the National Guard and that was a National Guard nurse. And until 2009, at which point I resigned my Commission, I was married to. I'm married to a retiree now, but at the time he was still active duty, getting put on orders to go OCONUS deployments, things like that. And so I went ahead and resigned my Commission. And then I was a GS nurse. So I have hit the gamut of every way that we can serve. In the AMEDD as a nurse or a medic. And it's been pretty awesome. I recommissioned in 2012 back on active duty, so here I am. I got my PhD in 2019 from the University of Wisconsin, Madison, and my PhD is actually an education curriculum and instruction where I focused on new media technology. So things like augmented and virtual reality, video games, screen based learning, high fidelity simulation. With a focus in learning science. So like what's the science behind how those things help us learn. And then here at the ISR I am working in the department where I support clinical research. And then I also conduct my own research and a lot of what I'm doing is in a virtual portfolio, still looking at virtual and augmented reality. And I'll go into more about that in a little bit. But I'm also the capability area manager for objectives within the research portfolios of prolonged care and severe burn, so I'm part of a system that drives research and things such as trauma and cold weather operations, palliative care and pressure injury prevention and prolonged field care, advances in burn care, far forward environments, and so I'm really living my current professional life in gap driven research environments and then all the programmatics that go along with that. It sounds probably boring to people who don't enjoy research but. It's really important. I've this job has just blown my mind with that the capability and the capacity for research and what we even as nurses sitting in this facility have to offer. So with that, more

important is who I'm not. I am not an expert in battlefield nursing. I do not have all the answers about the needs, the future operating environment. I rely heavily, heavily, heavily on evidence, literature, people who are working within other pieces of the command that support research. So that is who I'm not. Next slide, please. I think it's really important before we start to think about the two big entities that drive what we do. And so why does the army exist? It's land based like Hulk Smash doing our part within the joint force to win wars. And you can see, you know, train Title, 10 responsibilities, Man, train and equip the force. That's what the Army is responsible for. And then we know that wearing a uniform as a medical provider, we have some unique challenges. And we belong to our respective service as long as the Defense Health Agency and this slide is grossly simplified, I understand that. But really what I'm trying to get at here is that the Army and DHA have a responsibility for training. So, you know, Army's thinking about war and the DHA is thinking about how do we get people ready to go do that from a medical perspective. So a medically ready force, all the things that we do to make sure that people can have a PHA and hearing and are green on your Med pros. So you can go on leave and all those important things. And then a Medi Ready medical force, the training that meets the clinical readiness requirements, and in my mind, every day I'm asking myself, like, you know, what are we supposed to be ready for? How are we gonna get ready for it? And you know, how do we show that we're ready? Those are things I think about. Next slide, please. So really, shaping this conversation are gaps we hear about them. But how do we figure them out? And it starts with capability and capacity. That capability is you know what you can do like a knowledge, a skill, things like that. The capacity is you're like what you can hold on to. That's like max amount of information or whatever you can receive or absorb. And so I like to think about it in this way. If I tell you that I need you to cook. Six dishes really, really well. And you come at me and say, OK, cool. But I can only cook three dishes. Well, and I'm like, awesome. But I need you to be able to cook 6 dishes. Well, and by the way, I need you to be able to do it outside. So you're going to let me know your base skill set for those three dishes that you can cook, and then you tell me, oh, and by the way, my kitchen's big, but it's inside, and I really can't do these six dishes. And I'm like, well, why not? And you're like, well, I just told you. Umm my kitchens inside, so I literally can't do it and I can't remember how. I can't remember the recipe for six dishes. Umm so I have to find ways to get you to my expected outcome. Easy solutions are things like I'm gonna get you some recipe cards and write down all the recipes that I need you to know. I'm gonna make sure you have all the ingredients to cook all those dishes and then it moves into things that are more complicated. Like, you know, maybe I have to get you some classes or another chef that can do those other three dishes that you're not very good at. I also have to build you an outdoor kitchen because my expectation was that you do 6 dishes outside. So that's how I think about capabilities and capacities. And it's really how the Army thinks about them as well. The Army defines that gap as. The thing that. The mission or the task that can't be accomplished to us at standard, the standards that can't be achieved and then the operational conditions that cause that failure, those things help the army decide what are truly gaps and how are we going to get after them. Next slide please. OK, so interesting that Colonel Yauger also made a reference to ILE. I'm also going to do the same thing. So if you've been to ILE, this slide probably makes you feel like some sort of way. But rather than give you an entire presentation of force management model, I'll just sum it up by saying. Requirements drive everything and it seems logical, but like, how do you go from a strategic document focused on something very specific army to all the way through that convoluted and very lengthy system to get to something like an advanced? And like a new combat application, tourniquet. That was derived from an actual document, so just knowing it's complicated. And it really helps to understand how a gap is actually defined. Next slide please. OK, so what's driving change? This picture is a big driver of change, so welcome to our new priority theater. You can still see CENTCOM on the map, but Indo PACOM is very different from what we've been used to over the last two decades. I've listed some challenges that were

identified by U.S. Army Pacific, but. What else do you see? And so if somebody could just say something out loud and let me know, maybe use a microphone. I'm trying to be interactive without being in the room and so it'll be awkward. And let me tell you, there's no real wrong answer. So like, throw something out at me. Like, what do you see? That could be something that would necessitate change just from this picture. Lots of water. Lots and lots of water. Yes. Anything else? Very austere environments, ma'am. Yes, perfect. So water, absolutely space. This theater is very large, so lines of communication brings additional challenges for logistics, which are frequently contested and frequently an issue for us. Going back to that historical perspective that Colonel Yauger talked about, logistics are always a problem in combat. Water. Absolutely. Tons and tons of water. We've learned again historically how to do large scale in water, on land, and with air. So truly thinking of that that large joint force history has a lot to offer as a great teacher. Next slide please. So the intelligence community is also helping us drive change. There's continuous monitoring and interpretation of data from multiple avenues, and it shapes how we think and look at the future. In 2022, the annual report that was published by the intelligence community had a very short section on health security, and it goes beyond not just watching YouTube on a government computer. It recognizes the impacts of the pandemic as far as like reaching globally with the economic or political and even into societal spheres. Which is really a lot like our instruments of national power. And so the reaction as a nation to the pandemic may have shown our adversaries some of our vulnerabilities of the government, infrastructures and even just basic like, you know. Uh American human resolve on what happens when things get tough and challenging, and so all that information can be collected, utilized, and turned into something that could work against us. Additionally, like merging technologies to include weapons with a greater range and accuracy, unmanned vehicles being used by state and non-state actors. Artificial intelligence has an impact on how we think about requirements and gaps as well. And so for the last few years, Futures Command has been conducting a project called Project Convergence and it brings together the joint force. In an ideal mindset to integrate, like AI and robotics and autonomy to improve Battlefield situational awareness and then help accelerate some of those decision making timelines. So the website for Futures Command has a lot of information about project convergence and what the Army is doing to augment that human decision making with the use of AI and even some network lethality. So if that's something you're interested in, the websites on the bottom of the page there, next slide please. So the future operating environment, if any of you are a science fiction enthusiast, I'm thrilled. You can see this quote by Futures Command. It says "whoever can see, understand, and act first will win." Which actually sounds an awful lot like Hunger Games. That future operating environment looks like the clock arena from a I forget which year the book was, but if you have read this series, you'll understand my notes here, but all of these different environments can create a contextual condition that drives standards and then creates challenges for those capabilities and capacities, again making the gaps that we need to figure out. So like, I don't know about you, but I don't wanna get off a plane or a ship in Indo PACOM and have somebody say like may the odds be ever in your favor. That's not helpful to us. So unlike The Hunger Games. We already know some stuff about where we may potentially fight, and we also have historical information from literature and just tons of data from previous conflicts. And so we can help figure out what we don't know right now and potentially how to close or narrow some of the gaps that may be a problem for us in the future. We've done an excellent job at figuring out how combat casualty care in like a dry, sandy desert environment should go and what that looks like. But if you look at the bullets on this slide here, like what are some of the things that we should be thinking about now? This is the part where you throw something at me. All that water again, ma'am. Yep, lots of water. Anything else? You shout it out, I'll tell her. The Arctic, the Arctic. Yes, yes, Arctic, we are not doing a very good job right now. Admittedly of thinking about. Care, trauma care in the Arctic, there is. Again, you need a requirement and we don't

have a lot of requirements right now for the Arctic. There's Arctic strategy, but it's not yet been a thing that's really getting down into what we need medically for that environment. It's coming, but it's not there yet. Some other thing is like think about bugs. I mean, what happens if you in the in the Arctic melt snow cause we have to heat something up and we hold on to patients what bugs are underneath that snow in the mud and the dirt? We don't necessarily know. What does that do to wounds? What does heating patients or keeping patients warm due to wounds? We don't know. We haven't had to think about that for a really long time. Plants. What about where we have to put up hospitals like volcanic rock? Obviously we're not gonna put a hospital on a volcano, but potentially the ground that surrounds those types of areas. Does our stuff work there? Umm so again. Thinking about what? Is to come potentially and what we would need as people on the ground next slide please. Umm, so innovation and modernization don't happen in a vacuum. And if you think about the future from a possible versus a plausible perspective, the possible is what something is, something that even if it's not reasonable, it's capable of becoming true. While plausible means you could make a fairly reasonable valid case for something taking place. The G2 of Army Futures Command published a document on the future operating Environment 2035 to 2050, so 2035 seems like it might be a very long time, a like it's far away, but it's not. I mean, we're really trying to figure out how to even bridge the initial gap of 2028. So it's happening. It's just. It's not fast and you'll see why it in a in a couple of slides. Umm, so I love science fiction, obviously, and I think it plays a big part in innovation and so good science fiction is written so well and it's researched really, really well. So that things that are written seem possible and plausible, even if it doesn't feel like it at the time that you're reading it or watching it in real time. So, for example, the Jetsons, that cartoon was first launched in 1962. So look at what's happening on that slide and those cartoons. That's 1962. The creator, he saw the future from all the research and the work that he did to figure out how to create this child's cartoon. And it was telemedicine and digital technology and health care. And they were on the screen in 1962. In 1966, Star Trek introduced the tricorder as a handheld device that scanned patients to give a diagnosis. We are working on that now in in different ways, it's. Augmented. Ah, it's artificial intelligence. Machine learning. And that is being researched for this specific reason. And then 1984 Terminator gave us the possibility of, like a heads up, with display with a contact lens, which you can actually buy contact lenses now that give you like health reads. I think it's like synced to your watch or something like that. I don't wanna put anything in my eyeballs at this point, but those things do exist for actual use. And these were all things that were just written for entertainment. So. It's out there thinking about The Hunger Games. If you've watched the series or read the book, you know they use like this ointment that basically automatically healed wounds. We are working on those types of things in burn, so pay attention to. science fiction, what's happening on the fringe things that maybe seem really out there in kind of like? Weird parts of the world or places that we aren't normally concerned with and just think to yourself like, is that something that we should be concerned with just over the last few weeks I if anyone watching the Last of Us or has played that video game fungus. It's happening. Deadly fungus is happening in real time right now, so don't discredit. Uh, some of some of the science fiction that's out there. Next slide, please. So directing change? Umm Army modernization strategy and there's a link to or the at least the title of the document is on the bottom of the slide. There it's a good read and it has this thinking about multi-domain operations and you can see on that right hand side you know we're supposed to be MDO capable by 2028 with the capacity by 2035. So again capability and capacity thinking about gaps. So 2028 is really not that far away. Next slide please. Alright, trivia. Did you know that the Army's big five programs, which are these tanks and three tanks and two helicopters, took anywhere from 17 to 21 years to develop? That is a very long time to get from a concept all the way through that process from that ILE slide and then out to fielding of the force. It's a very, very long time that Black Hawk now it only took nine years and has because they had a good

base with the. UH-1 Iroquois. So they had something to go on that was helpful and they were able to get it through faster. But when you're thinking about rapid change, the landscape of conflict 20 years, we don't have that amount of time to really think about what we need now or add that exact moment to help us be successful. Next slide. So how do we bring about change faster? We're working on this and there are ways to think about change that is not so linear anymore. It's much more cyclical and we see this when we think about even EBP, you know, the focus PDCA. It's a cyclical process. Same thing with research. You know, theory drives practice, practice drives theory, and it's a continuous cycle. It doesn't just stop and it doesn't happen in a stagnant first this then this, then this. It's messy and so how do you take something that's messy and takes a long time and make it happen faster? And that is really what Futures Command is trying to figure out. So looking at the operating environment, all these different needs that we have and then you can see these threads, each thread has a different color with futures command, Big Army, joint organizations, DA, all of that stuff is bullpen in there trying to figure out how to make change happen faster. Next slide. So futures command the name of their game is rapid and so I will say that rapid is relative. This command started in 2018 trying to figure out how to get things. Through production, getting it recognized gap. Research, development, fielding and testing and then out to the force. And so again research can take up to 10 years just to get from the bench to like the literature. It is not fast and so. Relative time. Umm, we want something and we want it now. We live in a culture where, you know, expectation is near on demand. You can look up anything and get an answer almost instantaneously. So going through this process 10 years is much quicker than 17 to 20 or 21 and that is really what Futures Command is focusing on, how to get things out faster. Umm, so they're responsible for bringing these expectations from Big Army out to the field and you can see they have a lot of cross functional teams. These are areas that they're looking at for the future fight and then they have some commands that support that type of development. And just real broadly, a capability and development command and they are looking at organic research, developing capabilities that look at tech enabled solutions for soldiers futures can and concepts. A future environments concepts requirements for what that future environment will look like and how we increase lethality in that environment, not just like for the individual soldier but also, you know, tanks and helicopters and all those big pieces of equipment. And then, umm, there's a software factory and that does just what you think it would do. It builds digital proficiency. Doing cutting edge app development for use now and then in the future, but particularly looking at a disconnected warfare in 2028 and beyond, so dispersed large areas, not a lot of bandwidth for communication. And then there's medical research and development command, and I'll talk about that in the next coming slides. Next slide, please. So, umm, fun fact, there is an innovation command. It's the 75th Innovation command. They are direct support to Army Futures Command and they are a reserve unit located here in Houston, TX. And they are looking at operational innovation concepts, capabilities. They're just a unique command that has an excellent relationship and partnership with. Uh, like local? Companies and things like that really trying to figure out how to integrate the community and the military. So fun fact. Next slide. So what about medical? It might seem like we don't fit well into like this bigger piece of the puzzle from a futures perspective, but if you really think about. And you know the biggest quote UN quote weapon that the Army has, it's the individual soldier. And we have a huge piece in making sure that, that, that piece of equipment, that soldier is well cared for, ready to go, able to do the job that the, you know, that the government has asked them to do. And so you can see again here is a pamphlet I if you are interested at all at really what Futures Command thinks about Army medicine or the medical capabilities for a future fight 2028 and beyond? Is it pretty fast read and it's really available on the Internet. Next slide. Umm. Medical capability development and Integration Directorate, we just call it Med CDID. They are the ones that determine the gaps for army medicine. So what is missing? What can we do about it and how do we go about doing the

science and the research and the testing to make sure that we can help either close the gap completely or at least narrow it to where it's not quite a high risk. But you know some risk is acceptable. They are looking at things that focus on like equipment, manpower, how we configure to provide care across the operating environment, information, health technologies and then how we integrate with our sister services and coalition forces. Uh, they do talk about. Really what? What are we doing from the AMEDD's ten medical functions. And if you need a refresher on what those are, let me read them. Medical Mission command, medical treatment area support, hospitalization, dental services, preventive medicine services, combat operation. Combat and operational stress control, veterinary services, medical evacuation, medical logistics and medical laboratory. That is a lot of responsibility. And that we have done very, very well. Uh, in OIF OEF. And now we have to start thinking about, like, do does our current way work for what we would potentially face in the future? Next slide? A medical research and development command. There's actually a typo on this slide. We have seven labs and you can see them here. We currently belong to Futures Command and most of the commands gonna move to DHA. Except I believe the two labs that are in bold and that is a current plan. And General Simonson, if I'm misspeaking, I am so sorry. I'm going off of the information that I have. But. She's giving you the thumbs up, ma'am. OK. Thank you. Really, this command is the workhorse of Army Medical research from the federal lab perspective, and we're taking the gaps that are identified, prioritized, and funded, and then conducting early and Advanced Research and then some translational research as well to help bring solutions into the hands of medical personnel, both operationally and even within the MTFs. So you can see like from the labs that we have how we start to nest into those gaps, it all actually fits. It just isn't always obvious. And so if you have any questions about any of these labs, I'm happy to answer in any way that I can, but. Each lab has a very unique focus, and that's kind of what helps us delineate who's gonna do the work that has been directed by CDID or congressional special interest groups. Even DHA helps us figure out who's going to kind of take the lead on those types of things. And so the Institute of Surgical Research. It seems like ohh you guys do research on surgery. That's somewhat true, but we are the lab that focuses on combat casualty care, and I'll go into a little bit more about that in a minute. Next slide please. So what are we doing to think about how we shape the capabilities for multidomain operations here at the ISR, we're looking at these things that are happening on the left hand side of the screen. Umm. And they are happening not just at the ISR, but across medical research and development command. But when we look at these gaps and these areas of focus, we are not only looking at it from a medical care provider standpoint. We are also looking at it from a maneuver perspective because you have to remember, you know everything we do is for freedom of movement. Freedom of maneuver is what is going to win wars like Colonel Yauger said, you know, you can't sit. Sitting is bad. And so how do we think about doing these? Things either on the move or more rapidly more mobile in a different way. That is what the federal labs are really looking at. And so some big risks are capabilities that are related to like currently ahead, said CBRNE. Prolonged care. And due to delete, evacuation resupply issues. Capacity for hospitalization in theater, severe burns, and so. I'm even. Disease and non-battle injury from the book that Colonel Yauger had talked about, you know? And If I Perish, I have read the book. I have about 100 pages left. Umm and thinking about STI's and something like malaria. You know it can cause a very large problem for your fighting force and for your medical providers. So what advances in those areas also need to take place. Within the ISR, like I said, we're addressing many of these gaps and so while we are a federal research lab, just like the others, we here at the ISR have a unique skill set and a unique mission in that. We're the only federal lab that has an inpatient mission, the Burn Center, the Army Burn Center actually belongs to the lab instead of BAMC. And so the research that takes place in the burn Center is part of. The ISR and so it's really interesting to think about bench to bedside research and how you can take things from an early either preclinical or an animal model and

see that translate. You know, down the road to some of the sickest patients in the DoD. Next slide please. Uh, the future operating environment, so not surprising the army and therefore army research is trying to decrease our digital signal emission. And so you know we know healthcare, we emit a lot of signal, we use tech for everything. Our everything Bing bongs and has some sort of digital footprints and so much of what we do with research when we get funding for something for a piece of technology, a big piece of it is you know. The requirement is it can't emit a signal or a doesn't. Hopefully doesn't need a lot of bandwidth because potentially we may not have that. Available to us and so I could totally be snarky and say, like, you know, IV bags and tubing and manual blood pressure cuffs and stethoscopes like don't give off a signal and they still give data and an intervention. And that is very true because we saw that that was effective. Again, going back to what War Two and what those nurses had to do. But what I'll counter with now is that commanders are asking for ways to quote, unquote, see, the health of their force. On a distributed battlefield, they wanna be able to monitor things like fatigue, dehydration, vitals like in a near continuous time so that they can have a better read on the overall health and readiness of their force. So sensors, if you think about sensors. We can't just use any piece of technology that we want, so we have to think about net worthiness and what those sensors do, what type of signal they emit so that we can help meet the needs and the ask of that fighting force. And also do it in a way that's safe and you know not getting us like pinpointed for shelling and artillery. And then AI is a huge piece, just as Colonel Yauger said, a very large piece of current research. It's becoming increasingly more ubiquitous, you know, like chat GPT. It is everywhere. Somebody is trying to figure out how to do something better, smarter without a human. So to build machine learning and AI algorithms, it takes a huge amount of data. So these large data sets that essentially like feed the machine. So it learns what it's seeing and then it can build this autonomous system that can recognize what's normal and abnormal, and then identify the abnormality that it was, treat that it was trained to identify. And then you can go a little bit further and it can recommend a treatment. So that clinical decision support intermixed with augmented reality or an artificial intelligence system that. Tries to offload some of that cognitive load either of the human or removes the human completely. So really, if you're going one step further, the machines doing the treatment with little to no human interaction, these are things that we are currently working on within the Institute here some. closed loop resuscitation. Things like that. Looking at, you know, how do we think about early diagnosis of shock? And where we can help offload some of that cognitive piece of the human. So umm, to teach the machine, it's very similar to like reverse engineering. The way that a human makes decisions, human thought and action. And you know, humans are complicated the way that you're gonna think about a situation you have to take in so many things. It's not just. The like the diagnosis, it's everything that goes into it, the environment, how that patient is presenting because patients are also unique. And so it's very challenging to take a decision that an expert or somebody very skilled would make. And then teaching a machine how to do it. Just because human thought is, you know, obviously so complex. So we have here an engineering and automation group. Like I said, that does a lot of research on how to make people smarter and use technology to increase their capability as far forward as possible and how to increase the capacity of the human. What can we provide you? How do we provide it to you so that you can use it when it's necessary and you don't have to think a whole lot. And then here on this slide, again, science fiction, if you've seen the show Foundation or read anything from Isaac Asimov, these pods will people and they move them around and they hold them for various periods of time and so could something like this exist for a future medical evacuation? Yes. Yes. Like Colonel Yauger said they're already doing. Removal drone removal we're doing. We're testing. How do you even deliver supplies without a human involved? And so could it exist? Absolutely. Is it something that's being thought about? Yes. But what about those, like ethical, legal and moral considerations? Like how much do you trust the machine? It's very, very complex and it's not as simple as, hey, we made a

thing. We're going to put a human into it and then, you know, send him away. Like what patients do you put in there? Is it gonna be the sickest, sickest patients? Is it gonna be somebody who maybe doesn't need a lot but just needs a little bit of something that we can't give where we're at, but they can, you know, be evac[uated] quickly, relatively safely? Autonomously and then be able to be brought back forward so that they can return to the unit. It's all stuff that, you know, begs the conversation and think that things that are being thought about when we put on. Like proposals and things like that forward. Next slide please. And just a 7-minute time check. OK. so I've always been interested in technology, learning, care delivery, all of those things. And so I came into this space because I like tech and I wanted to figure out ways that we could enhance that use. And so I've always had a small piece of my research arm in technology and it actually fits really well here at the ISR, both clinically with burn care and then also with automation and the that sort of tech. advancement group. And then I've done some work with virtual reality and how do we teach skills using VR? There's a paper that we put out when I was in my PhD program and it was pretty successful on teaching a skill at nurses don't normally do. Uh. And then also creativity. I've been involved with some work on creativity and why that's important is because, you know, thinking outside the box, being able to take that information and do something with it rapidly is a skill that's very, very important. And you know, how do you not confine yourself to doctrine or how do you look at a CPG differently? Those are all things that are important for medical, but also the war fighter. Next slide, please. Trying to wrap us up so that I can get you guys back out on time. My current work is in augmented reality and burn care. So we just finished up a study. We took a Microsoft HoloLens. We took a bunch of CPGs that have to do with burn care pain. Uh, prolonged field care and we kind of wrote them and revise them in a way that's easy to digest, accessible language for somebody who's not a physician. And then we loaded them up into the HoloLens and we created some apps that allow the user to be able to provide burn care without a lot of prior knowledge or any prior knowledge. And so you here on this slide, you can see we've been able to do like multi-modality inside the HoloLens where that top right screen is an escharotomy. They can watch a video if they've never seen one. If they don't even know what it is, but they know they probably need to do one because based off of all the other stuff that's been fed into this software, they can see how to do one. They know what right looks like, and then the system walks them through how to do it with a holographic overlay. And right now that overlay doesn't map to an actual human. That's pretty advanced and we're. Uh, trying to get some funding for those types of things, but. Umm, we can allow we were able to do an a holographic overlay so that the user could do an escharotomy on a simulated burn leg. We had a really cool sleeve. It feels real. It was a great study. And we found that The thing is usable like what we made is actually usable. People did really well with it. They were able to calculate medications correctly, calculate the total burn area surface size correctly, which is really important for triage and thinking about evacuation and treatment, how to calculate the fluid resuscitation for initial burn resuscitation. And then like I said, also how to perform an escharotomy next slide. So I've talked rapidly and at a high level about how we're thinking about change, how we start to think about getting things to the battlefield and the process that that goes through. But really what I'm interested in is from your perspective, wherever it is that you work a clinic inpatient care. From your standpoint, what should we be thinking about? What do you think we should be thinking about for care in an austere environment and how does the work that we do inside of an MTF translate? Or vice versa. And I'm open to hearing what you are thinking cause this is actually pretty much my last slide because if you go to the next slide, Colonel Yauger already covered it 100%. I was already thinking about TSNRP. So one thing I'll say, you don't have to be a scientist or a CNS to participate. So we just want people who are interested in advancing nursing care in multiple environments on the battlefield within our MTF. Through, you know, multiple avenues. I am a RIG leader for the Expeditionary care RIG, so I'm biased. I think it's great and there's some stuff coming up. We'll put out some

information and make sure you guys have that for a upcoming panel where we're gonna talk about the book that Colonel Yauger was talking about and thinking about it in a way of. So what, like what happens? How should we be thinking about the lessons learned from that book in a in a future type of mindset? So again, I'm really interested in what you guys are thinking about. What should we be thinking about? On and what types of questions do you have? I'm gonna turn on the mic, ma'am, and we are gonna see if anybody in the room has a question. OK. Thanks. OK. Hey, can you hear me there MAJ Samosorn. Yes. Yes, ma'am. I can hear you. Ohh wonderful. First of all, excellent presentation. Just wanted to ask you just some reference to creativity. Do you have any tips to share on how you typically relax into your creativity, thinking on those thoughts as you consider the future battlefield? Yeah. One of the biggest things is you have to get out of your own way and stop being worried about being right and be willing to accept that it's messy. Creativity is messy, and we have to be in environments that allow for that to happen and welcome it and embrace it because, you know, even in research, like sometimes science just doesn't work. And you thought your hypothesis was gonna be solid and you were on track. And the next thing you know, it's not it. And so. You know, how do you embrace the messiness that can be creativity and then also realizing what creativity is? It's not necessarily our dance. All that type of stuff. It's like. Just putting something together that maybe hasn't been put together before or thinking about. A topic in like a different way, it doesn't have to be very huge and profound. It can be very simple and. It's really you just have to get out of your own way and let it happen. Not be afraid of it. Any other questions in the room? Or thoughts? Yeah. Hello ma'am. I have a question ranking from one to three. What is your most Yes. favorite science fiction movies? Yeah, it's a great question. Umm OK. That's why. OK, I love All Star Wars. All of them. I did enjoy The Hunger Games. And let's see, I do so not a movie. I actually watch a lot of Star Trek as well, so. Yeah, if you couldn't tell 'cause that's what was on the slides. I tended to lean towards things that I was like, Oh my gosh, that's, you know, from something I saw on the show or in the movie. But Major Samosorn and this is Colonel Yauger phenomenal Yes, Sir. presentation. I am just so stunned on how eloquent you Thank you. stated all those major strategic efforts and it was a pleasure to listen to. My question is, is that I suspect that you feel the same way that I do about imagination and that is something that I believe that most researchers need to have a sound foundation in in order to be innovative. What strategies do you have? That facilitate your imagination or creativity. Umm. So I to get started. Like I told, I believe in like I believe in unicorns completely. the though further out it is like just bizarre and off the wall. I think that's a starting point and then working backwards into what could actually be something that's doable. Uh, I like to say like, throw spaghetti at the wall and just see what sticks. Like I throwing things out there without fear of like sounding silly or whatever. Just putting it all out and being like, Oh yeah, that's crazy. Like. I'm going to write a Kevlar or a camouflage colored Unicorn into battle with my cat and we're gonna like, provide the best care. OK, that's totally false. But what could I do? That is literally how I think, like it's backwards. The big idea at the end. And then I come back from that. Major Samosorn this is General Simonson. First of all, I want to thank you for that presentation. I see smiles on the on all of the audience. I think we had some chuckles that you weren't able to see. From your perspective, it's always hard to be the presenter behind the screen. But I do want to tell you. First of all, before I ask my question from thus forward for ground combat operations, even if I don't say it in a briefing. The Hulk smash is always going to be in the back of my mind, so I will have like a sneaky grin on my face when I when I say the term ground combat operations I will always be thinking Hulk smash and that will be because of you. My question though is do you do you feel? I mean I'm just intrigued by the virtual reality project that you just completed. And do you feel that that can be scaled? for nursing, for Team, ICTL completion and inpatient care challenges that you know the sets and reps that we're currently having a hard time getting after because traumas not really one of the key things that we're able to get after right now in our current environment over. Absolutely. Yes, ma'am, I do.

I feel very strongly that digital modalities, it doesn't have to necessarily be virtual or augmented reality, even good screen based training can be effective in providing the exposure that's needed for the basics, for the ICTLS. And so one of the things that we were thinking about here as we're throwing spaghetti at the wall with the with the recent. Uh, call. That was put out from TSNRP for those high priority areas with burn care and is truly a the ICTL for potentially not the ICU or ER nurse, but the 66H because that's a very large population that's probably gonna have to have. Some skills that perhaps we haven't had to utilize in the in the past and so we are thinking about ways to bring that information to those types of. Of groups in a way that is. Able to be packaged and pushed and it where you don't have to travel necessarily to receive that training. It's very challenging. You know we have one burn center and the demand because of the ICTLs not just from the army but across all services. The ask of the education Department here has just skyrocketed because now everyone's like, Oh my gosh, we need, we have to check off our ICTL for burn care. And I do think that there are multiple avenues at getting after some of these ICTL's where it doesn't require travel or. A lot of expense, sometimes expense I guess to maintain. But just providing the exposure for the concepts. Digital is an excellent platform. Yes, ma'am. No more questions in the room ma'am. OK. Thank you.

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Ma’am, this is Lieutenant Apolinario. We've emailed quite a bit over the past few months. I just want to thank you for your time and presenting. And I know it's 1830 for you in Texas, so I appreciate you on a Friday evening being here to present. So thank you, ma'am. Yeah. Thank you for having me. I will now turn it over to Colonel Swigger for a few words. It's on. Thank you so. I'm shorter than you, quite a bit.

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I just wanted to take this opportunity to share three thoughts with you that I had throughout this conference and I think it's really important to bring ourselves back together and say, OK, now what do we do because we've had a lot of amazing information. We've been inspired by some of these folks who've presented to us and now what does it mean for you? So I have three thoughts on that that I was hoping that you would let me share. The first one starts with nurse. Scientists are cool. So if you have not figured that out. Yet. Most of your presenters today were nurse scientists, the ones who were not were all so cool. So I don't wanna say that, but we are a fun community who are very welcoming of diverse thought, different ideas, and we need all of you because we don't have all the thoughts and ideas and we need them from the bedside, from the challenges that you face and you see in that moment when you're talking to somebody and you're like, ah, this isn't right or why do we do this or what? If we could do it differently, so this is one my shameless plug to say for those of you who are interested in becoming scientists, we have some great pathways to do that, including BSN to PhD. So anybody who's out there who's interested, please come see me. e-mail me. Umm or Major Samosorn and so she is the Deputy Consultant to the Surgeon General. And let me just say that she was the only Major in her last symposium with all of the TSG consultants together, room full of Generals, room full of Colonels. She was there because of her expertise. And you can see why. So thank you, Major Samosorn. My second thought is I want you to find a friend after you leave here, go share the excitement with somebody else. Talk to them about what we talked about today and if they happen to be somebody who's not in our system, encouraged them to join us. We need nurses. You saw all those QR codes on your screen savers that tell you how to bring somebody into our system. Take a picture of that and bring it with you. Because our mission is unique and it's so important and it's really different than what a lot of

nurses are doing on the outside. We get to do some really cool stuff in support of some scary but inspirational opportunities that are out there to participate in. So bring folks in to our system because we need all hands together. That's techs and nurses, medics, MSAs, anybody you can think of, bring them on down, hold their hand through the process because we know it's long, right? So don't lose hold of them. Once you find them. And lastly, I'd be remiss if I didn't bring this back to Lieutenant Colonel Juanita Warman. We think about her and some of the things that she was doing. She was leaning into challenges. She leaned into growth. She was a reservist that came on active duty, who volunteered to deploy. She was not afraid of a challenge. She was not afraid of the unknown. She was able to ask important questions and know that she had a role in it. And I would like all of us to be part of that. So think about what that means for you. And if it happens to involve scientists, CNSs, any of that come on up to the 8th floor and sit down and have a conversation with us. We would love to see you. Thank you.

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Thank you, ma'am. And now it gives me great pleasure to introduce the acting Assistant Director for Support and Chief Nursing Officer Defense Health Agency Falls Church, VA, Brigadier General Katherine Simonson.

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Well, first of all, I'd like to think Colonel Swigger cause she just made she just took like 3 minutes off of my. What comments? I was gonna make. So I'll get you out of here in like 5 minutes. You just great. But the part of the three things that I'm gonna say cause I had three things. First was, I was gonna implore you to bring your friend to Madigan to bring a friend to the Defense Health Agency. And. And what that means is we need a team. We have a purpose here. And from all of our speakers. And I would say, especially from our speaker, that talked about large scale combat operations. Colonel Yauger, we have a purpose that is now in this current environment. More important than ever. So. Find a friend. Bring them on the team and build our community. Build our family so the other two things I'm gonna talk about are a little bit about Juanita in a in a personal way because she was my friend and also a little bit about how the this. This the. This conference got started with the great folks in Med-Surg and they're sitting here today. So I wanna call a few of them out and talk about just the gratitude and the attitude of Juanita so that you can take that when you leave here. So first of all. She is a reservist. She did come on active duty and she did to deploy forward, but she didn't have to. She'd behavioral health nurse, who was who was brought here to Madigan and ended up not doing behavioral health work. She was the evening/night supervisor. So she did her behavioral health work as she walked around every night talking to the nurses. She's very curious. She was she did her, her behavioral health, her mental Wellness, providing as she. Looked for challenges as she asked the question many questions, but one that always stuck with me. If you did that, what would that mean to that person? And she asked. I was. I was talking to her about a challenge with, with a, with an officer who came to me with a private a private problem. And she asked me if you did that for them. What do you think that would mean for them? And I thought about that. I mean, of course, we were gonna help the officer, but that question made me think about all of the things about that person. It made me think about all of the second and tertiary events that might happen in that person's life. And it made me think about the way she asked that question because then I had to think about what my role was. I had to think about what the impact might be for that officer. I had to think about keeping that officer in service and what that might mean for. For our team and so I always think to myself when you ask a question, you should ask a question that provokes thought, and Juanita was really good at that. So she could get you talking and she could coach you in that way. So I take from her is

that you need to speak less and listen more. And so she came here to do, to do a job for behavioral health. And that's not how she was assigned. She was assigned to be the Evening night supervisor. And when the call came out for behavioral health nurses to go forward, they had a they had a need. She gave up her mobilization here at Madigan. She raised her hand and she said I'll go. I'll go forward. And we know what happened at Fort Hood, so she never got to go forward. But I always like to have that part of the story told she could have stayed here and she didn't. She pushed back against folks that said you don't have to go and she said it's my job to go. And I think those of us that were here with her and know her know that that was a part of her spunky personality. And on a personal note, I would like to say. She got me into ballroom dancing, and every time I go dancing with my husband, I think of her. So and then second and finally, I'd like to thank the just the just the wonderful people who put together the Med-Surg conference. Umm, I, Colonel Hodge, is if Colonel Hodge is here. And that was her. Her brainchild. And we have Lieutenant Colonel Currie. Who was Lieutenant Currie? Who put together and was organizing the very first Warman conference, so it's just appropriate that you're here now. As Lieutenant Colonel Currie, speaking at the conference, things come around to come around, and I think Juanita would be very happy that you're here. I am I appreciate that there are many years, there's been thousands of nurses that have come to this conference and have really enjoyed the fellowship of enjoying each other's company, learning from other nurses, being inspired. When we leave here to go forth and do great things. So I think from those of us that knew Juanita and miss her dearly and from my heart. I just appreciate that her memory is living on and on and that's what we like to remember. So I would like to acknowledge the team who put this together. So would you come up? Miss Jessica Vailencour. Captain Danielle Garcia. First Lieutenant Nathaniel Anderson. First Lieutenant Brendan. Apolinario. Did I get it right Apolinario and then Lieutenant Gillian Lee. So all the work is there are these folks and. For those of you who've worked on conferences, military balls, nurses week, you know it doesn't start two weeks before, probably the months of planning and whenever it and whenever it includes continuing education credits. You know that those packets are long and arduous. I'm looking at you. So I wanna. I wanna thank you for all the work that went into. It's one of the. DHA nursing coins. Thank you round of applause. I'm gonna turn this back over to you. And I think you're done. Thank you. General Simonson, we greatly appreciate your time and for you being here. And with that, we'd like to present you with your speaker gift as well. Thank you for being here ma'am. Thank you. Ladies and gentlemen, this concludes the 14th annual Lieutenant Colonel Juanita Warman Nursing Excellence Conference. We would like to thank you all for coming and we look forward to seeing you again next year in 2024. Please remember to complete the conference post-test and evaluation on the DHA J7 CEPO website. You have until 2359 Eastern Standard Time on April 7th. To register complete the post test and evaluation to receive credit. Thank you very much for coming out and having amazing weekend.