Cleaning, Irrigating, and Dressing of an Open Wound

Good morning. Today I'm going to show you a demonstration on cleaning, irrigating, and dressing an open wound. This is going to combine two skills in your textbook. One is irrigating a wound using sterile technique. The other is cleaning and dressing a wound using a wet to damp dressing change. We are going to do both using sterile technique.

Many facilities have gone to clean technique. Because evidence based practice shows that healing time is just as effective using clean technique. However, we're going to do sterile technique so that you get more practice on how set up and maintain a sterile field.

Before you come to lab, I want you to make sure that you understand the principles of wound healing. The stage of wounds. Because I'm going to ask you what stage this current wound is at on this patient. The difference between sterile versus clean technique is very important to know. And lastly, I want you to understand the rationale behind why are we doing a wet to damp dressing change. What's the purpose of that versus dry. What's our end goal for our patient?

So in this scenario, we have a patient with an abdominal wound, which actually is a dehisced abdominal wound. I went ahead-- I know that I've planned my day, I know I'm going to be doing my dressing change, so about 30 minutes ago I assessed my patients pain level.

On a scale of zero to 10, she stayed it was an eight. I reviewed my physician orders and my MAR, my Medication Administration Record, and I went ahead and premedicate my patient. I followed the six rights of medication administration as well.

During that time while the medication was setting in and becoming effective, I went ahead I reviewed the facility policy and procedure. Which you should always do prior to any skill or procedure you're doing with the patient.
I reviewed the physician and/or wound care nurse orders and I gathered my supplies. I went back into my patient's room about 25 minutes later reassessed her pain, she stayed it was two. And I went ahead and took the opportunity to then go ahead and provide education.

Because she said that two was an acceptable level, so therefore she was open to being able to receive some education. This is not the first time she's had her dressing changed, however we always take opportunity to provide education to our patients.

So let's go ahead and review the supplies that we have. So for the irrigation portion, I have an emesis basin to collect any irrigant fluid or drainage. I have a chux pad to protect my bed. I have a 30 mL lure lock tip syringe and a 19 gauge angiocath.

You're going to note that your books says a 30 mL to 35 mL syringe and a 19 gauge angiocath when those are placed together create what we call 8 psi or Pounds Per Square Inch. 8 psi is what we need to effectively remove debris and anything from the wound that we want to remove from the wound. We have those supplies.

I have adhesive tape remover in case when I remove the dressing I have difficulty with the tape. I want to make sure I maintain patient skin integrity and I don't want to pull that off. So you can use adhesive tape remover or even normal saline will help to remove your tape.

When I put the new dressing on I have what's called skin prep, that helps to protect, again, the patient's skin integrity. Provides a protective barrier where I'm going to put the tape so the tape doesn't compromise her skin integrity. I have a measurement device, this is disposable. This is what I'm going to use to measure the wound.

I have a biohazard bag for my dressings if I need it. I have a wound care tray which lists multiple supplies.
Each facility is going to be very different in what they carry in their supplies. Some might have trays, some you may have to put things together. You're just going to go ahead and need to check on the facility and what they have. It lists all the supplies in here.

I have a sterile cotton tip applicators. Some extra tape. I have sterile gloves. Sterile gloves do come in this kit, however I don't care for the sterile that are in there, so I've made sure I've got an appropriate size for me. And because I'm a Regis Nurse, I always carry extra sterile gloves.

Lastly, I have a sharps container. When I go ahead and open up this angiocath it does have a needle in it, so I need to dispose of the needle in the appropriate approved container. Which is sharps container, so I have that as well.

OK so now that we've gone ahead, and I've reviewed this supplies, let's go ahead and we'll get started with the demonstration.

So I'm going to knock and enter the room. Knock, knock.

Good morning, it's Jennifer again, I'm your nurse today. I'm going to go ahead and we're going to do the dressing change that we talked about a little bit earlier. So are you OK with that? OK.

I'm going to go ahead and perform hand hygiene before I touch my patient.

And remember, you can use your alcohol base rubs up to 10 times, and then you need to use soap and water.

Can you please tell me your name and your date of birth. OK, excellent thank you so much Mrs Jones. I'm going to go ahead-- I've pulled the curtain to provide privacy-- I'm going to go ahead raise the bed to a comfortable working height.
I want it at least waist level so that I'm not bending over and hurting my back. And as well, when we set up our sterile field, I going to need to use the bed at some point, so I want to make sure it's at least waist height so that I can utilize my bed.

Mrs. Jones, I see you're not a fall risk, your side is up over there for safety. I'm going to be on this side, so I'm going to go ahead and lower the side rail over here.

Make sure you don't have any lines or tubes or anything in the way. So I know I ask you a couple minutes ago your pain, but I just want to make sure that you're comfortable before we do this procedure, so again, on a scale of 0 to 10, zero being no pain at all, 10 being the worst pain you've had, can you rate your pain for me right now? OK it's at a two still, and that's acceptable for you? OK, great. Thank you so much.

So now I'm going to go ahead and I'm going to expose the patient. And I'm only going to expose the area that I'm working on. So Mrs. Jones I'm just going to go ahead and pull the sheet down, keeping you covered as much as possible. And I'm going to pull your gown up above where our dressing is.

OK excellent. So it just exposes that area. I'm going to go ahead and I'm going to put on a pair of clean gloves, because this part of the procedure is done using only clean technique. I'm going to grab my biohazard bag, and I'm going to go ahead and I'm going to remove my tape from my dressing.

I'm going to place the biohazard bag down towards the foot of the bed, so the patient doesn't need to see the dressing. And I'm going to go ahead and I'm going to loosen the edges of my tape. Again if I have any difficulty I have adhesive tape remover or normal saline that are available to me.

Now once the tape is loosened up, I'm going to pick this up from the center, up and away. And I want to go ahead and I want to assess my drainage. I want to note the color and consistency. I would say this is a serosanguineous. Yellow is serous, red is your bloody drainage, so together it's serosanguineous drainage.
The amount, its saturated through the ABD dressing. So I would not the amount is a large amount of drainage. I don't notice any odor at all. So I'm going to go ahead, because this is saturated, and place it in my biohazard bag.

I noted on the last nurse's documentation that he packed the wound with two, four by four dressings. So I want to go ahead and make sure my dressings are still moist. Which these are. If the dressings are dried out, you want to make sure that you go ahead and moisten those dressings because you don't want to pull them out when they're dry. They will remove good new tissue if we do that.

So I'm going to remove the dressing simply by just grabbing lightly and making sure I've got one, and the next one, two. So I have two dressings that I've placed again in my biohazard bag. So that matches the documentation that I have.

My next step is to now go ahead and inspect the patient's wound. Again this is abdominal dehisced wound and what I'm looking for-- it's difficult sometimes to see on the video-- so we'll go through this again in lab. But I'm looking for signs of healing.

So I'm noting granulation tissue up on the base, up at the top of my wound. Sorry, at the top of the wound I'm noting granulation tissue. It's pink so it looks good. The edges of the wound are very slightly pink, which is normal for this stage of healing.

I'm going to go ahead and palpate your wound now Mrs. Jones, let me know if you have any tenderness. So when I'm palpating the wound, I'm checking for tenderness, temperature changes and particular heat, which show signs and symptoms of infection, and any access drainage that's coming out.

Mrs. Jones is that tender at all? OK, so it's a little bit tender. That's normal, again, for this stage of healing. Which is why we made sure to premedicate the patient.
So I also, inspecting the wound, I'm looking to see is there any debris, is there slough or necrosis in the wound, and I don't see any at this point. So that is a good sign. Our next step is going to be measuring the wound.

So I'm going to go ahead and grab my measuring tape. Again this is disposable. When you're measuring a wound you've got inches and centimeters. Typically when we're measuring wounds, we'd measure them in centimeters. It's a more accurate form of a measurement.

The bottom line is you want to make sure that you are measuring it using the same measurement as the last nurse. So the last nurse used centimeters and that's what we're going to measure with. So we're going to measure the length of the wound. So the longest portion of the wound. So I've got 14 centimeters. By the width of the wound at its widest point, which is 3 centimeter.

So I've got 14 by 3. The next thing I want to measure is the depth of the wound. So I'm going to use one of my sterile cotton tip applicators for that. These also have a centimeter measurement device on here so you could use this, or again your measuring tape.

I want to maintain the sterility of this, and even though I have clean gloves on, I'm not going to touch the end of this cotton tip applicator and that's going to help it maintain sterile. So I'm going to go ahead, I'm going to place it into the deepest part at the base of the wound, but I'm not poking or prodding, move my fingers down to the approximate depth, bring it back up, and again go ahead and measure. So I have a 3 centimeters for depth.

I'm going to go ahead, place this in my biohazard bag.

I now check for any tunneling or undermining on my wound. So I'm going to take my other sterile cotton tip applicator. And I'm going to go ahead and I'm just going to lightly check the wound for any tunneling they're undermining. So I'm very depressing. If I notice any tunneling or undermining I want to use the clock concept to say where that tunneling undermining is.
So using the clock concept, 12 o'clock in the patient's head, six o'clock is the patient's foot. So if I notice tunneling are undermining, for example right here, I would note that at 3 o'clock. I would note the deepest point and the location of it.

I don't notice any tunneling or undermining on that patient, so that's excellent. So my measurement and my assessment of my wound is complete. I'm now going to go ahead and I'm going to get rid of my biohazard bag. This would be placed in the biohazard trash. Which is going to be located in different parts in your facility.

So I go ahead and get rid of that. I'm going to go ahead and I'm going either get rid of my disposable tape or again I can save this for my patient. I'm going to remove my gloves. And I'm going to perform hand hygiene.

OK Mrs. Jones what we're going to do now is I'm going to turn you on your side because we're going to go ahead and we're going to do the irrigation and the wound care at this point.

So I'm going to go ahead and don a new pair of clean gloves. All right Mrs. Jones, is it okay if I remove the pillow from behind your head to place it behind your back? So you're going to use, one, or two, three pillows, whatever you need to turn the patient onto their side.

Are you comfortable? Just make sure you're not blocking anything or anything else in the way. Now Mrs. Jones what I'm going to do is I'm going to go ahead and place this chux pad so we protect your gown as well as your bed.

And I'm going to go ahead and place emesis basin to collect again, any fluid irrigant. OK, I am now done with this. So I'm going to go ahead and remove my gloves again. And I'm going to go ahead, perform hand hygiene. And now we're going to go ahead and set up our sterile field.

Couple things on the principle of setting up a sterile field that I want you to remember. Whenever we do a sterile field, we want to make sure that everything is at least at waist height. So we want to go ahead and raise up our tray table to at least waist height. I don't have a lot of
working space on here, so I need to be very careful on where I'm going to go ahead and don my sterile gloves and all those types of things.

So since that is at least at waist height, I can go ahead and I can actually don my sterile down at the foot of the bed. Because what you want to make sure is that your eyes are on the sterile field at all time. OK?

So typically what I'm going to do is I'm going to place my sterile field up at the head of my bed. So that I know I'm now going to turn my back on it at all. For purposes of the video, I'm going to go ahead and set it up here so that you can see what I'm setting up.

So I've got everything that I need again in my supplies. I'm going to move these right here for now.

First thing I'm going to do is go ahead and I'm going to open up my wound care tray, making sure-- so with sterile field, you want everything close to you. Again at least at waist height. I want my trash can below me. I never want to turn my back on my sterile field. And a one inch border is considered not sterile.

So as I'm opening up my wound care tray, I can hold the edge of this because again the one inch border is not considered sterile.

I'm going to remove this, drop it into my trash. Again, I've got sterile gloves on here, I said I don't like them, so I'm going to go ahead and I'm going to remove them and place them in the trash. I'm now OK to touch the outside of this container because that's not sterile, and I'm going to go ahead and lift this drape up to make my sterile field.

So you want to look for your edge on this. And one inch border, remember again, is considered non-sterile. When you lift it up, lift it up in a way so it doesn't have the table. Find your other edge and go ahead and open up your sterile field.
Remember 1 inch border is not sterile, so we're okay to grab it. Now when you lie this down make sure you're not reaching over your sterile field. So you want to lie it down very carefully. OK now we've got our sterile field so we need to open up any of our contents before we put on our sterile gloves.

So when you're placing things onto your sterile field you want to make sure that you get them into the center of your sterile field. So I've got my package open, I'm rolling it away from me, and setting it on-- dropping this again into the trash. I then have my angiocath.

Same thing, hit the center of the field, into the trash. And last I have my sterile cotton tip applicators.

Now when I'm opening anything up, I want to take a step back and make sure that I don't open anything over my sterile field. Because you don't want any microorganisms falling onto it. So I always take that step back and then come forward. These tend to roll, so just be careful when you place them onto your sterile fields.

OK now everything else in my kid is sterile. So I need to don my sterile gloves to be able to go ahead and get everything on. So I can either move to the end of my bed, like I told you. If this were up at the head of the bed, or you can even use this area. Again it's at least at waist height.

So I am going to go ahead and I'm going to don my sterile gloves right here. Again my bed is at waist height, and that's fine.

Mrs. Jones, I'm just putting on my sterile gloves right now. You have to have a very compliant patient to work close to the patient.

Again my eyes are on my sterile field at all times. So I'm going to go ahead and put on my dominant gloved hand first. Reaching inside, adjusting making sure I have a nice tight fit.
Now I'm ready, so now I can touch anything sterile. I can get rid of this. And I can touch anything inside of my kit.

So I want to go ahead take out my ABD dressing, I have a biohazard bag in here I don't need, so this is going to go into the trash. I have a role of gauze, I don't know if I need that but I going to set it on my sterile flied just in case.

I have several dressings. Remember I pulled out two dressing in the packing. So I want to be on the safe side. So I'm probably going to put about four in there in case, for any reason, I need more dressings for my packing. So I'm going to go ahead lay those down on my sterile field as well.

What I have inside of here is a tag. I have a wound measurement device that may or may not need. I'm going to place these back into this container. Which-- this container is separated so that I can put my sterile solution in one side and wet my gauze with the other.

I have my sterile saline which is not opened yet so I can set it there. And I have my tape. If I need to adjust my tray at this point, I have to adjust it from the inside, that's OK because it's sterile.

Remove the cap for my saline. Hence why the one inch border is not sterile, if anything hits the edge of the table. However, that was a sterile cap, so it's fine. Now remember, we have to reach around, if need be, so that we don't ever cross our sterile field.

So I'm reaching around and I'm wetting my gauze, and then I'm pouring the rest of my solution into my container. And then this goes into the trash.

OK I am now ready to do the irrigation portion. I'm going to go ahead and I'm going to pick up my angiocath and I want to get rid of my needle. So I'm going to remove this, place this into my sharps container. And I have to come around and reach around because I don't want to cross over my sterile field. Wanting to be very careful that my glove does not touch either the sharps container or the curtain.
Again, eyes on my sterile field. I'm going to pick up my syringe. I'm going to go ahead draw up my irrigation fluid. The last noted that it took 30 mLs of normal saline for him-- when he was irrigating the wound before it came off clear.

So I'm going to use at least 30 mLs, I'm attaching my syringe, I can get rid of my cap. OK Mrs. Jones, we're going to go ahead and irrigate your wound. When irrigating the wound we want to make sure that we maintain a 1 cm to 3 cm distance from the wound surface.

We also want to direct the solution onto the wound bed from the area of the least contamination to greatest contamination. So I am going to be working-- think of that shower analogy from basically from the top to the bottom of this wound. Working in a back and forth motion.

My goal is, I want to keep irrigating with however much saline I need until the solution runs off clear. Be very, very careful to make sure that you are keeping your gloves above waste height et cetera. Now on a human being this stuff is going to roll off much more. You see some of it is still staying in this wound. And that's because it's a manikin.

I would keep doing this again until the solution had runoff clear. If I need to pull up more saline solution I simply disconnect my angiocath, draw more solution, put it on, and just continue to keep going with however much I need.

Once I'm done with this, there's not a sharps on it, so it can go into the trash. I am now ready to go ahead and pack my wound.

So what I'm going to do, is I have to grab my packing. I noted again that the previous nurse documented that he used two gauzes to pack. So I'm going to reach into my container, I'm going to go ahead and wring out the gauze.
Take a step back, because they don't want to get my dry sterile field wet, because that would compromise the sterility. And I'm going to go ahead and unravel this gauze. What we don't want to do is just ball this up and start basically shoving it in the wound.

We want to unravel our gauze and we want to go ahead and ball it up in our hand and we're going to thread it through our fingers to pack our wound. So I'm going to pick up my sterile cotton tip applicator and I'm going to work this gauze back and forth.

My goal is to pack the wound up to, but not over, the edges. And I'm not sure if you can see with my hand in the way, but I will show you guys how to do this when you are in lab specifically.

OK so I am now going to go ahead and grab another one, wring it out. Again my sterile field is always within my vision. Some gauzes are going to unfold in two some are going to be folded up four times, is just going to depend on the brand.

Again ball it up in my hands and go ahead and continue packing. Make sure that your gloves aren't touching the patient's skin. Now the reason why I need another gauze here, is I think this gauze is different from the type of gauze that I pulled out earlier. So that's OK.

The only time I would be concerned-- I'm going to grab a new cotton tip applicator so I can pull these apart. The only time I would be concerned is if my measurements, like my depth, my length, my width, were a lot larger then what I had from the previous nurse. That would mean the wound's getting bigger.

I think I'm just using another gauze, because again it's different. This gauze is much-- it's not packed as tightly as the previous. Grab my other cotton tip applicator and continue packing the last portions of this wound.

OK excellent. So we now have it packed up to the edges, not exceeding the edges. It's not too tight, but not too loose. I'm going to get rid of this. So my last part of my dressing change, I can either put so four by fours on top of that, if I wanted to, or I'm just going to go ahead and place my ABD dressing.
ABD dressings are abdominal dressings, they're very absorbent. They have a lot of cotton inside. They do have a blue stripe. You want to make sure that the blue stripe is always facing out. So I'm going to go ahead grab this from the center place it on my patient.

I'm now am done being sterile, so I'm now going to go ahead and tape my wound. I can use the sterile tape that was in there. What's in your kit is a very small amount of tape. Or I can go ahead and get a new role of tape.

If my gloves were dirty, I will go ahead change them, perform hand hygiene. My gloves are pretty clean, so I'm going to go ahead. And what I'm going to do is again I'm going to protect my patient's skin integrity. So I'm going to go ahead and put some skin prep on.

So I'm just going to go ahead and outline. Mrs. Jones I'm just putting some skin prep on, it might be a little cold, it's a little wet. And it's going to provide a protective barrier for the patients skin. It's kind of like a layer of clear nail polish.

I would wait for that to dry, which takes a little while on the manikin. And then I would go ahead and put my tape on. What you don't want to do with tape is ever tear off strips and place them on your bedside table and then put them on your patient. Bed side tables have a lot of microorganisms growing them, therefore you would transfer those to your patient and you don't want to do that.

So you're going to go ahead and continue taping. This is really close to the patients pubic area, so you might tuck that a little bit. And then go ahead and place your tape.

All right Mrs. Jones, how are you doing? Great.

Now I'm going to time, date, and initial my dressing. However I'm not going to do it right on the dressing itself, that would transfer microbes as well.
So I'm going to set this down. I'm going to clean up my area. Any irrigation fluid would go ahead and be disposed of. Everything else can go into the trash. I'm going to go ahead clean up.

Mrs. Jones, are you feel OK? A little bit sore, OK that's should get better in a little bit. So what I'm going to do is I'm going to go ahead-- I am not at risk for blood or body foods at this point-- I'm going to remove my gloves. Perform hand hygiene.

All right Mrs. Jones, I'm going to remove the pillow from your back and put it back behind your head, is that OK? All right, excellence.

Now I could put on a pair of clean gloves at this point if I were concerned about blood or body fluids.

Just come towards me. How's that, it that comfortable.

Go ahead and now I'm going to take my my tape. I'm going to write my time, date, and initials, so that the next nurse knows when this dressing was changed. A wet to damp dressing change is changed about every 12 hours so the dressing doesn't dry out.

I'm just going to pull your gown back down, pull your covers back up. I'm going to lower bed to the low and lock position, put your side rail back up. Here your call bell, I want you have that in case you need anything. All right.

What I would finish with is documentation. My documentation is going to include. My pain assessment and did prior to my dressing change. The fact that I premedicated my patient. I reassessed her pain and what was her response to the pain medication.
My assessment of the wound. So I took off the dressing. What was the color, amount, and consistency of the drainage that was on dressing. How did my wound look? What was my assessment? Did I see any sloth, necrosis, anything like that?

The color of the drainage. Any debris in the wound. Again, when I irrigated, how much irrigation fluid did I use until it was clear. And I would want to note that I irrigated until it was clear with 30 mLs of normal saline. My assessment of the mood after I irrigated. Because once all of that debris is removed, your wound might look a little bit different.

Your measurements of your wound including your length, your depth, and your width. The wound care that I did. How many dressings I packed it with. What type of dressings I used. Applied and ABD, et cetera.

Patient tolerance to the procedure and the patient education I provided.

That concludes our demonstration on cleaning, and irrigating, and dressing of a wound.