

Closed (Inline) Tracheostomy Suctioning

Female1: Hi, Heather. Thank you for coming today. The purpose of this is that our nursing students are starting to see more and more inline suction on the ward and we're not familiar with how to use those. I wonder if you could go through this with us.

Female2: Absolutely. So closed suction or inline suction is great for preventing the patient from getting infections primarily. If we're using just a single catheter what we find is that if we're not using it correctly we can actually introduce a whole bunch of infection to the patient, cause them some issues, etc. So if we have this on all the time it's ready to go. If the patient is suddenly producing a whole bunch of secretions and you want to get at them very quickly this is perfect for that [situation].

F1: It's already set up. So we're actually using the same catheter multiple times. As opposed to when we were doing tracheal suction up here, we used a separate one that's sterile.

F2: That's correct. On the floors they tend to do it more of a clean procedure than a sterile procedure. Which then just includes more problems with infection. So this is changed out usually about every 48 to 72 hours depending on hospital protocol. And usually it'll have a tag on it somewhere that will tell you when it should be changed out. So look for that when you're actually going to go use it.

F1: So how we have it set up here, this patient would be receiving oxygen.

F2: Could be oxygen or humidified air depending on what the patient requires. And then your suction is hooked up to your suction regulator and we're using

somewhere between 110 to 150, even up to 180 mmHg suction. Depending on what the patient requires.

F1: So why don't we just go through an assessment, like when we're first starting here. So determining whether a patient needs to be suctioned, what would we be seeing?

F2: Okay, so if we were coming in to see a patient, maybe we noticed the patient's been coughing a lot, but if we come into the room, the patient's coughing, maybe they have a sat monitor on. Their saturations have dropped a little bit, especially a patient on oxygen. Have a real quick listen to the chest, see what's happening in the chest. Are we hearing a lot of coarse crackles, do we see any secretions actually in this portion of the swivel adaptor? So those are the kind of things you can look at for [in] the patient to determine whether they need suctioning or not.

F1: Okay, so we've listened to the chest. Should we be looking at anything around here, like, on this trach to make sure it's secure and this is attached?

F2: Absolutely. So just make sure that the tracheostomy is in place and [you can get] two fingers only underneath the trach holder. And make sure that's all ready to go. And before you suction just make sure you've got your safety equipment ready. You've got a bagger hooked up to oxygen, there's an adaptor on it that can hook up to the tracheostomy tube and also make sure there's another inner cannula available. That should be all with the safety equipment beside the bed. Because if that inner cannula gets plugged up the patient's obstructed, that is their only airway. So if that obstructs, even during suctioning, we can take it out, put another inner cannula in and now the patient has their airway again.

- F1: Okay, and so we determine that by looking at the size of this one and then it should be a size smaller, right.
- F2: There should be two. [One the] same size and one smaller.
- F1: Okay.
- F2: Yes, and you can either go by the size on the outside of the flange or go by the colour. Some of them are colour coded. So it should be the same colour as, what the outer ring is or the outer cannula, and again, the smaller size will be a different colour. Yeah, that's fine. As long as they've got an inner cannula in there that can give you an airway.
- F1: Okay, so we know that they need suctioning. This is all tied. This is secure, two fingers here. What do we do next?
- F2: Okay, so we've got our suction on. Make sure our suction's connected and ready to go. We sometimes will pre-oxygenate the patient as well, especially if we've seen their saturations drop down.
- F1: And what exactly does that mean?
- F2: That means just increase their oxygen a little bit more than what they've already got on. So if the patient's on 35 percent oxygen, bump them up. You can go up to 50, even up to 100 if they require it. Just remember to turn it back down again when you're finished.
- F1: So that would only be for, like, 30 seconds or two minutes?
- F2: We do it for at least a minute but if the patient is in distress, suction. It doesn't matter at that point. Yes, bump up their oxygen, you may notice their sats have dropped, but if they are obstructing, go ahead and suction. But if this is done,

- you're doing your assessment of the patient and you notice a lot of coarse crackles, patient doesn't look in distress yet, bump them up. Pre-oxygenate them, give them a little bit of reserve before you actually go and start to suction.
- Okay. So we bumped them up, got their suction on. Make sure that it's working.
- F1: I'll just turn that on for you.
- F2: It's okay. Just kink the tubing to make sure that the suction is actually working, and it is. We're ready to go. Let the patient know what you're doing. 'Hi, Mr. Pickle, I'm just going to suction those secretions out of your airway'. So what we're going to do is we're going to push the inner cannula in and pull the bag back. Inner cannula in, bag back, inner cannula in, bag back until the patient starts to cough or you hit resistance. And that way you know you're at the carina and then you would push the button. Just holding this [the flange] so that you're not pulling it out. And suction. Fifteen seconds maximum.
- F1: And on the way back you can use solid pressure like that or...
- F2: It's continuous, yes. And that's another great thing with the closed suction, it's continuous. We don't do the intermittent.
- F1: And I noticed that on the inner cannula here there's a little black band.
- F2: This black band tells you you're as far as you can go, so you don't keep pulling the catheter out. What can happen is you can actually pull it through the one-way valve and then this thing will just fill up with gas; especially if they're on a ventilator. Another thing that this is used for is if the patient needs instilled, like we need to put some normal saline down to loosen up secretions, this black line, we push it in until we just see the black line here. And then we would put a

syringe of normal saline on the end and introduce it. And then pull this back. Wait a couple minutes or the bag until it gets down there.

They're coughing, coughing, coughing. And then we can go ahead and suction again. Okay, and pull back.

F1: What happens, like, when we were using the soft catheter doing the oropharyngeal area is that we had to wash it afterwards to make sure-- 'cause it gets plugged.

F2: That's right.

F1: What happens with this?

F2: Exactly the same thing. You still have to clean the catheter out. So you would attach a syringe of normal saline. This is my pretend normal saline. Attach a syringe of normal saline. We would start suctioning and put in enough normal saline to clean the catheter out.

F1: So it's just going in here and it's being suctioned back here.

F2: That's correct. So it's really important to start suction first before you start introducing the normal saline so it doesn't start tracking into the patient. Especially if they're lying supine and not at a semi-Fowler's or a Fowler's position. I'll just cap that back off again. So that's for cleaning. And then we use the same port for, like I said, for installation.

F1: Okay, so once we've suctioned, like, you would go down a couple, three times, maybe.

F2: That's right. So keep auscultating in between. Give the patient a chance to catch their breath. Look at their saturations. Make sure that they're doing all right. Ask

them, are you okay? Especially if they can nod or give some indication that they're all right. Again, just auscultate, see if there is any more coarse crackles. If there is then keep going until you're done. Until you have a nice, clear chest.

F1: Okay, and so what do you do in terms of charting after this?

F2: So for charting what we record is if there were any complications. How many times we had to suction; The quantity that we got, so we use one, two or three, minimum is one, three is a lot; What color it was. So was it yellow, was it green, what colour. And also was it mucoid, was it purulent, was it smelly, those are the types of things that we'd record... Is it bloody?

F1: How would you do this-- what if it was yellow and smelly and that was unusual or new? Can you take a specimen out of this?

F2: Absolutely.

F1: Or is this too dirty.

F2: No, we can take a sample out of this as well. So for sampling we use a suction trap. So we can use the suction trap with just your regular suction catheter as well or we can also do it with this. So we would insert it.

It comes in a sterile package. You bet. Okay, and then we would hook it up, okay, so that it's inline. It's important to keep this upright. If you have it sideways what will happen is you'll suction out secretions and it will go right into your suction canister which won't do him any good.

F1: Oh, that's good. We'll keep that upright.

F2: So you'll be suctioning the patient same as you were doing before. So we're going to insert the catheter and then suction back. Get our sample, try not to dilute

it with normal saline if you can. And then once you've got-- even just a little bit's enough, disconnect. Fold it over. Label it, send it down.

F1: And off to the lab. That's pretty simple.

F2: And hook back up to your suction. Which I dropped on the floor.

F1: And we would clean this and get a brand new one and put that back on there.

F2: There, just like that. Just that easy. And then also note that we took a sample for CNS as well in our charting.

Yes. So personal protection equipment that we would use with this type-- because we're not handling the catheter we can just use clean gloves. If you don't have glasses or anything, maybe some protective eyewear as well 'cause you just don't know what may happen if this pops off. You may get sprayed a little bit, and if you were in an isolation room, of course, you'd have to take other precautions.