

## CLINICAL SCENARIO

# Suction Pump 1

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PURPOSE:  Teaching / Practice  
 Test Result: Pass / Fail / Retest

## Scenario Overview

The participant is asked to help a student nurse who is worried about a 6-hour old baby with secretions. The participant should assess the baby, and prepare and provide suction, as well as know the right pressure and possible complications. Finally, the tubing is disposed of and device cleaned.

## Reminder to Facilitator

Facilitator team to decide what is essential for participants' understanding; we suggest facilitator team underline or mark these essential items in the **INFORMATION/RESULT** column before beginning the session to ensure these are highlighted in that section.

**ALWAYS REMEMBER THE CANDIDATE SHOULD START WITH THE 4 Ss**

**Safety** of the staff and patient

**Setting** for the environment and patient

**Stimulate** the patient for response

**Shout** for help

## Begin Scenario

**SETTING THE SCENE:** A preterm baby in the nursery is seen by a student nurse who finds that the nose and mouth are full of secretions. The baby was born 6 hours ago by normal vaginal delivery without any problems. The student nurse is worried that the baby seems to be choking and having difficulty breathing. **WHAT DO YOU DO?**

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
1	Observe baby	Baby is in a warming cot and obviously preterm. He is moving normally but his mouth and nose are full of frothy mucus	
2	The setting is alright as he can be kept warm and observed when stimulated	The baby makes normal movements in response to gentle stimulation	
3	Call for help	Help is on the way	
4	Open the airway (neutral position) and Look, Listen and Feel for breathing What do you do now?	<ul style="list-style-type: none"><li>The airway is full of mucus</li><li>The baby is breathing rapidly but regularly</li><li>Suction the mouth and nares</li></ul>	
5	What equipment do you need for suctioning?	<ul style="list-style-type: none"><li>Suction pump with collection reservoir attached</li><li>Ensure there is a filter in the pump and that a long enough suction tube is attached to the outlet to reach the patient comfortably</li><li>Suction catheter (size F6 or F8) and/or Yankauer sucker</li><li>Water in a small container</li><li>Gloves</li></ul>	
6	When you turn the suction pump on it does not work What do you do?	<ul style="list-style-type: none"><li>Make sure it is plugged into the wall and switched on at the wall</li><li>Press the power switch at the back of the machine to 'on'</li><li>Make sure the power cable is pushed well into the socket on the back of the suction machine</li></ul>	

continue to the following page 

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
7	Show me the different sorts of suction catheters	<ul style="list-style-type: none"> <li>Yankauer sucker: can remove thick mucus and particles</li> <li>Suction catheter: usually size F6 for preterm and F8 for term babies</li> </ul>	
8	What pressure should the suction pump be set to?	Start at about 60 mmHg. Do not go above 100 mmHg	
9	Please show me how will you introduce the sucker	<ul style="list-style-type: none"> <li>Choose the correct size (F6) catheter or Yankauer</li> <li>Show that it is placed in the mouth or nose with the tubing pinched, which is released when the sucker tip is in the correct place to suction</li> </ul>	
10	Please show me where you will suction How long will you suction for?	<ul style="list-style-type: none"> <li>Suction each nostril and then the mouth</li> <li>Suction only as far as can be seen and only for as long as it takes to clear the airways (10 seconds)</li> </ul>	
11	What happens if you suck too deep or too long?	<ul style="list-style-type: none"> <li>The baby's heart rate drops</li> <li>Bleeding can occur</li> <li>Damage can be done to the soft tissues at the back of the throat</li> </ul>	
12	Please show me how you remove the suction catheter from the mouth	Pinch the tubing to stop the suction tip from sticking on everything as you pull it <b>gently</b> out of the mouth	
13	Now the airway is clear, what do you do next? Check for other signs of respiratory distress: Head nodding    Crackles Grunting        Nasal flaring Cyanosis        Respiratory rate Pulse oximetry    Indrawing / acidotic breathing	<p>The baby is pink in colour, has mild indrawing, but no other signs of respiratory distress. The chest is difficult to auscultate because of the noises from the nose and mouth:</p> <ul style="list-style-type: none"> <li>RR is 65 b/min</li> <li>HR is 150 bpm</li> <li>SpO<sub>2</sub> = 95%</li> </ul>	
14	What do you do now?	<ul style="list-style-type: none"> <li>Place the baby comfortably into the warmer crib</li> <li>Check after 15 minutes that secretions have not built up again</li> </ul>	
15	Next, what do you do?	<ul style="list-style-type: none"> <li>Recheck the SpO<sub>2</sub> after 10-15 minutes</li> <li>SpO<sub>2</sub> = 92%</li> <li>Document the readings and actions in the notes</li> </ul>	
16	What do you do with the suction catheter?	<p>To clean the suction catheter:</p> <ul style="list-style-type: none"> <li>Use the water in the small container, and then put it in an antiseptic solution to sterilise</li> <li>Or, discard it safely</li> </ul>	
17	Please show me how you put away the suction pump	<ul style="list-style-type: none"> <li>Switch the power off at the wall and on the suction pump</li> <li>Empty and clean the collection bottle and replace on the suction pump</li> <li>Put the suction pump where it is always kept in the department unless the baby needs such frequent suctioning that it should stay near the baby's cot</li> </ul>	

### THANK YOU

#### **i** REMIND PARTICIPANTS:

All suctioning must be done **gently**, not too vigorously nor for too long.

#### **!** INFECTION PREVENTION AND CONTROL

Be sure to wash your hands thoroughly and to put on gloves before handling the baby or any equipment. After every use, remember to disinfect all consumables and equipment before using them again.

# Scenario end

## CLINICAL SCENARIO

# Suction Pump 2

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PURPOSE:  Teaching / Practice  
 Test Result: Pass / Fail / Retest

## Scenario Overview

*In the nursery a 2.3 kg baby has been vomiting. The participant should assess the baby, prepare and provide appropriate suction, understand the right pressure and possible complications, as well as clean and dispose of tubing.*

## Reminder to Facilitator

Facilitator team to decide what is essential for participants' understanding; we suggest facilitator team underline or mark these essential items in the **INFORMATION/RESULT** column before beginning the session to ensure these are highlighted in that section.

**ALWAYS REMEMBER THE CANDIDATE SHOULD START WITH THE 4 Ss**

**Safety** of the staff and patient

**Setting** for the environment and patient

**Stimulate** the patient for response

**Shout** for help

## Begin Scenario

**SETTING THE SCENE:** A 3.3 kg baby aged 2 days is in the nursery and has vomited. **WHAT DO YOU DO?**

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
1	Observe baby	Baby looks normal in size, is alert and active	
2	The setting is alright as he can be kept warm and observed when stimulated	The baby makes good movements in response to gentle stimulation	
3	Call for help	No need for help at present	
4	Open the airway (neutral position) and Look, Listen and Feel for breathing What do you do now?	<ul style="list-style-type: none"><li>The mouth and nose are full of milky mucus</li><li>The baby is breathing but is struggling with the vomit in the mouth</li><li>Suction the mouth and nares</li></ul>	
5	What equipment do you need for suctioning?	<ul style="list-style-type: none"><li>Suction pump with collection reservoir attached</li><li>Ensure there is a filter in the pump and that a long enough suction tube is attached to the outlet to reach the patient comfortably</li><li>Suction catheter (size F6 or F8) and/or Yankauer sucker</li><li>Water in a small container</li><li>Gloves</li></ul>	
6	When you turn the suction pump on it does not work What do you do?	<ul style="list-style-type: none"><li>Make sure it is plugged into the wall and switched on at the wall</li><li>Press the power switch at the back of the machine to 'on'</li><li>Make sure the power cable is pushed well into the socket on the back of the suction machine</li></ul>	

continue to the following page 

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
7	Show me the different sorts of suction catheters	<ul style="list-style-type: none"> <li>• Yankauer sucker: can remove thick mucus and particles</li> <li>• Suction catheter: usually size F6 for preterm and F8 for term babies</li> </ul>	
8	What pressure should the suction pump be set to?	Start at about 60 mmHg. Do not go above 100 mmHg	
9	Please show me how will you introduce the sucker	<ul style="list-style-type: none"> <li>• Choose the correct size (F6) catheter or Yankauer</li> <li>• Show that it is placed in the mouth or nose with the tubing pinched, which is released when the sucker tip is in the correct place to suction</li> </ul>	
10	Please show me where you will suction How long will you suction for?	<ul style="list-style-type: none"> <li>• Suction each nostril and then the mouth</li> <li>• Suction only as far as can be seen and only for as long as it takes to clear the airways (10 seconds)</li> </ul>	
11	What happens if you suck too deep or too long?	<ul style="list-style-type: none"> <li>• The baby's heart rate drops</li> <li>• Bleeding can occur</li> <li>• Damage can be done to the soft tissues at the back of the throat</li> </ul>	
12	Please show me how you remove the suction catheter from the mouth	Pinch the tubing to stop the suction tip from sticking on everything as you pull it <b>gently</b> out of the mouth	
13	Now the airway is clear, what do you do next? Check for other signs of respiratory distress: Head nodding    Crackles Grunting        Nasal flaring Cyanosis        Respiratory rate Pulse oximetry    Indrawing / acidotic breathing	<p>The baby has some indrawing and it is difficult to make out breath sounds:</p> <ul style="list-style-type: none"> <li>• RR is 68 b/min</li> <li>• HR is 150 bpm</li> <li>• SpO<sub>2</sub> = 97%</li> </ul>	
14	What do you do now?	<ul style="list-style-type: none"> <li>• Place the baby comfortably into the warmer crib</li> <li>• Check after 15 minutes that secretions have not built up again</li> </ul>	
15	Next, what do you do?	<ul style="list-style-type: none"> <li>• Recheck the SpO<sub>2</sub> after 10-15 minutes</li> <li>• SpO<sub>2</sub> = 95%</li> <li>• Document the readings and actions in the notes</li> </ul>	
16	What do you do with the suction catheter?	<p>To clean the suction catheter:</p> <ul style="list-style-type: none"> <li>• Use the water in the small container, and then put it in an antiseptic solution to sterilise</li> <li>• Or, discard it safely</li> </ul>	
17	Please show me how you put away the suction pump	<ul style="list-style-type: none"> <li>• Switch the power off at the wall and on the suction pump</li> <li>• Empty and clean the collection bottle and replace on the suction pump</li> <li>• Put the suction pump where it is always kept in the department unless the baby needs such frequent suctioning that it should stay near the baby's cot</li> </ul>	

**THANK YOU**

** REMIND PARTICIPANTS:**

All suctioning must be done **gently**, not too vigorously nor for too long.

** INFECTION PREVENTION AND CONTROL**

Be sure to wash your hands thoroughly and to put on gloves before handling the baby or any equipment. After every use, remember to disinfect all consumables and equipment before using them again.

**Scenario end**

## CLINICAL SCENARIO

# Suction Pump 3

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PURPOSE:  Teaching / Practice  
 Test Result: Pass / Fail / Retest

## Scenario Overview

A 7-week old baby is brought into the emergency room full of secretions and wheezing. The participant should assess the baby, know the right pressure and provide suction, deal with pump problems, give oxygen (monitor by SpO<sub>2</sub>), and assess the baby. Complications of suction and cleaning and disposal of tubing are to be discussed.

## Reminder to Facilitator

Facilitator team to decide what is essential for participants' understanding; we suggest facilitator team underline or mark these essential items in the **INFORMATION/RESULT** column before beginning the session to ensure these are highlighted in that section.

**ALWAYS REMEMBER THE CANDIDATE SHOULD START WITH THE 4 Ss**

**Safety** of the staff and patient

**Setting** for the environment and patient

**Stimulate** the patient for response

**Shout** for help

## Begin Scenario

**SETTING THE SCENE:** A 4 kg, 7-week-old baby is brought into the emergency department with rapid breathing. He has an audible wheeze and a lot of secretions on the nose and mouth. **WHAT DO YOU DO?**

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
1	Observe baby	Baby looks well-nourished and is alert	
2	The setting is alright as he can be kept warm and observed when stimulated	The baby makes vigorous movements in response to gentle stimulation	
3	Call for help	Help is on the way	
4	Open the airway (neutral position) and Look, Listen and Feel for breathing What do you do now?	<ul style="list-style-type: none"><li>The airway is full of mucus</li><li>The baby is breathing rapidly but regularly</li><li>Suction the mouth and nares</li></ul>	
5	What equipment do you need for suctioning?	<ul style="list-style-type: none"><li>Suction pump with collection reservoir attached</li><li>Ensure there is a filter in the pump and that a long enough suction tube is attached to the outlet to reach the patient comfortably</li><li>Suction catheter (size F6 or F8) and/or Yankauer sucker</li><li>Water in a small container</li><li>Gloves</li></ul>	
6	When you turn the suction pump on it does not work What do you do?	<ul style="list-style-type: none"><li>Make sure it is plugged into the wall and switched on at the wall</li><li>Press the power switch at the back of the machine to 'on'</li><li>Make sure the power cable is pushed well into the socket on the back of the suction machine</li></ul>	
7	What if it still doesn't work?	<ul style="list-style-type: none"><li>Check that power is on</li><li>If it is but the machine still won't turn on, find a working suction pump quickly</li></ul>	

continue to the following page 

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
8	Show me the different sorts of suction catheters	<ul style="list-style-type: none"> <li>• Yankauer sucker: can remove thick mucus and particles</li> <li>• Suction catheter: usually size F6 for preterm and F8 for term babies</li> </ul>	
9	What pressure should the suction pump be set to?	Start at about 60 mmHg. Do not go above 100 mmHg	
10	Please show me how will you introduce the sucker	<ul style="list-style-type: none"> <li>• Choose the correct size (F6) catheter or Yankauer</li> <li>• Show that it is placed in the mouth or nose with the tubing pinched, which is released when the sucker tip is in the correct place to suction</li> </ul>	
11	Please show me where you will suction How long will you suction for?	<ul style="list-style-type: none"> <li>• Suction each nostril and then the mouth</li> <li>• Suction only as far as can be seen and only for as long as it takes to clear the airways (10 seconds)</li> </ul>	
12	What happens if you suck too deep or too long?	<ul style="list-style-type: none"> <li>• The baby's heart rate drops</li> <li>• Bleeding can occur</li> <li>• Damage can be done to the soft tissues at the back of the throat</li> </ul>	
13	Please show me how you remove the suction catheter from the mouth	Pinch the tubing to stop the suction tip from sticking on everything as you pull it <b>gently</b> out of the mouth	
14	Now the airway is clear, what do you do next? Check for other signs of respiratory distress: Head nodding    Crackles Grunting        Nasal flaring Cyanosis        Respiratory rate Pulse oximetry    Indrawing / acidotic breathing	Despite suctioning of the upper airway, the baby has marked indrawing, there may be fine crepitations, but the chest is difficult to auscultate because of the noises from the nose and mouth <ul style="list-style-type: none"> <li>• RR is 80 b/min</li> <li>• HR is 180 bpm</li> <li>• SpO<sub>2</sub> = 88%</li> </ul>	
15	What do you do?	<ul style="list-style-type: none"> <li>• Give O<sub>2</sub> 0.5 L/min by nasal prongs</li> <li>• Place the baby comfortably into the warmer crib</li> <li>• Check after 15 minutes that secretions have not built up again</li> </ul>	
16	Next, what do you do?	<ul style="list-style-type: none"> <li>• Recheck the SpO<sub>2</sub> after 10-15 minutes</li> <li>• SpO<sub>2</sub> = 91%</li> <li>• HR is 180 bpm</li> </ul>	
17	What do you do now?	<ul style="list-style-type: none"> <li>• Continue O<sub>2</sub></li> <li>• Document the readings and actions in the notes</li> </ul>	
18	What do you do with the suction catheter?	To clean the suction catheter: <ul style="list-style-type: none"> <li>• Use the water in the small container, and then put it in an antiseptic solution to sterilise</li> <li>• Or, discard it safely</li> </ul>	
19	Please show me how you put away the suction pump	<ul style="list-style-type: none"> <li>• Switch the power off at the wall and on the suction pump</li> <li>• Empty and clean the collection bottle and replace on the suction pump</li> <li>• Put the suction pump where it is always kept in the department unless the baby needs such frequent suctioning that it should stay near the baby's cot</li> </ul>	

A full history and examination need to be taken to make a definitive diagnosis

**THANK YOU**

**i REMIND PARTICIPANTS:**

All suctioning must be done **gently**, not too vigorously nor for too long.

**! INFECTION PREVENTION AND CONTROL**

Be sure to wash your hands thoroughly and to put on gloves before handling the baby or any equipment. After every use, remember to disinfect all consumables and equipment before using them again.

**Scenario end**

# Disclaimer

Newborn Essential Solutions and Technologies–Education Clinical Scenarios:  
Suction Pump

**This series reflects the work of the [NEST360°](#) team. Some rights reserved.  
This work is available under the Creative Commons Attribution-  
NonCommercial-NoDerivatives 4.0 International license  
(CC BY-NC-ND 4.0; <https://creativecommons.org/licenses/by-nc-nd/4.0/>).**

Under the terms of this license, you may copy and redistribute the work for non-commercial purposes, provided the work has not been modified, and it is appropriately cited as indicated below. In any use of this work, there should be no suggestion that NEST360° endorses any specific organisation, products, or services. The unauthorized use of the NEST360° names or logos is not permitted. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: *“This translation was not created by Newborn Essential Solutions and Technologies (NEST360°). NEST360° is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition”.*

## SUGGESTED CITATION

NEST360°. *Newborn Essential Solutions and Technologies–Education – Clinical Scenarios: Suction Pump*. (October 2020). License: CC BY-NC-ND 4.0.

## RIGHTS AND LICENSING

For queries on rights and licensing, see the full legal code for the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International Public License (<https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode>).

## THIRD-PARTY MATERIALS

If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

## GENERAL DISCLAIMERS

All reasonable precautions have been taken by NEST360° to verify the information contained in this publication. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by NEST360° in preference to others of a similar nature that are not mentioned. The published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall NEST360° or affiliated partner institutions be liable for damages arising from its use.

The authors have made every effort to check the accuracy of all information. As knowledge base continues to expand, readers are advised to check current product information provided by the manufacturer of each device, instrument, or piece of equipment to verify recommendations for use and/or operating instructions.

In addition, all forms, instructions, checklists, guidelines, and examples are intended as training resources to meet national and local health care settings' needs and requirements.