**Safer Tracheostomy Care - Simulation Scenario 1**

<table>
<thead>
<tr>
<th>Course lead</th>
<th>Colette Laws-Chapman</th>
<th>Faculty</th>
<th>Katie Page</th>
</tr>
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<tbody>
<tr>
<td>Course /Curriculum</td>
<td></td>
<td>Target del</td>
<td>Acute nurses/doctors, Care home &amp; community</td>
</tr>
<tr>
<td>Scenario name</td>
<td>Routine Care</td>
<td>Group size</td>
<td>12</td>
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</tbody>
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**Patients Name:** David McDonalds  
**Patients Age / DOB:** 52 year old gentleman on the ward

| Major Problem | Medical – UTI  
Routine tracheostomy care |
|---------------|------------------|
| Learning Goal | Medical/ Clinical  
Routine Care Bundle  
Understand the importance of dressing change, inner cannula care, stoma care and cuff pressure monitoring  
Ability to:  
1. change ties /dressing  
2. inner cannula check & replacement  
3. cuff pressure monitoring  
4. recognising infection at stoma site |
| Suggested NTS/Technical | Effective communication  
Planning  
Task allocation  
Leadership  
Team work  
Patient safety Checklist, Check trache box |

**Narrative Description**

52 years old gentleman with history of polio and respiratory failure requiring long term tracheostomy and on Trachy Mask. He was admitted to the ward 3 days ago with a urinary tract infection which he’s receiving intravenous antibiotics and has made good recovery. 

Otherwise, he has no current complaint from his chest point of view, with minimal secretions and on 28% Misty Ox. He is PEG fed, has long-term urinary catheter, has no sitting balance and needs assistance with all daily care. No other PMH except for recurrent UTIs and is on long term prophylactic antibiotics (trimethoprim). NKDA. Recently, it has been noted worsening light green secretions at his tracheostomy stoma site.

**Staffing**

| Faculty Control Room:  
1 x Sim man controls  
1 x Sim co-ordinator / phone operator |
|-----------------------|
| Faculty Role Players:  
1 x Student Nurse  
1 x anaesthetic SpR / Outreach team member |
| Candidates | 1X Staff Nurse  
1X FY2-ST4  
(then a third candidate arrives for help) |
<table>
<thead>
<tr>
<th><strong>Case Briefing</strong></th>
<th><strong>To All Candidates</strong></th>
<th><strong>To Role Players</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mr David McDonalds</strong> is a 52 years old gentleman who was admitted 3 days ago with UTI requiring IV antibiotics/ fluids- He is making good progress now and . He’s known to have polio with long term tracheostomy and on trache mask (TM). He has long term indwelling catheter and UTIs’ His stoma site has greeny secretions for past 2 days but otherwise no current respiratory problems. You’ve been handed over that he needs to have his routine trache care. The nurse assistant is available to help you with this.</td>
<td></td>
<td>Student / Nurse Assistant: Can help if told exactly what to do. Able to get other help.</td>
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| **Manikin preparation** | **Pt attached to a saturation monitor only. PEG tube in situ. IV access: 24G (pink) cannula. No arterial line. Urinary catheter and urine meter – 250 mls yellow urine. Rigid trache tube - size 9, non-fenestrated Tracheostomy tube, cuff up with inner cannula in situ, with correct ties, cuff inflated & a dressing. **Redness around trache site with green secretions & with a wet dressing. On humidified trache mask on 28% Misty Ox. Air entry equal and clear. Need to ensure O2 cylinder is working on arrest trolley for suction if at Guys Room set up | As per routine ward – with bedside trolley, with complete Blue bedside tracheostomy box inc 10 ml syringe for cuff deflation etc- (see list inside box) Functioning suction unit with fine bore suction catheters x 5 of each size and gloves at bedside. Bag mask Valve & tubing green ‘Mapleson C’ waters circuit with Catheter mount attached, Non re-breathe O2 mask, Size 2, 3, 4 oral airway |

| **Simulator operation** | Patient not able to speak as has a non fenestrated tube with cuff up Patient remains stable through procedure unless significant mistake is made | |

| **Props needed** | Fine bore suction catheters, Blue Bedside equipment box (correctly filled) . Bag -valve-mask tubing, green ‘Mapleson C’ waters circuit with Catheter mount attached, Tracheostomy care trolley Drugs: N. Saline nebs, N. Saline bag, nebuliser barrel & tubing Defib, cardiac monitoring, thermometer, BP cuff, obs chart and drug chart, sputum pot for NBL, swabs. **Trache chart** | |

| **Notes to faculty** | Underlying cause of patient’s admission and problem is UTI. They are stable. Purpose of the scenario is as a first scenario – introducing them to routine tracheostomy care as well as recognising early infection of the stoma site. Inner cannula check, tape and dressing changes. A second person should be present for all stages of care including stoma dressings and tape ties Scenario will end with the RN completing the basics trach care tasks Aim that the participants will perform a routine assessment of the patient and also check all the emergency bedside equipment prior to conducting basic care, then patient desaturates to 85% and we expect the nurses to suction and that oxygen saturation improves to 95%. | |
Observations:

**Initial**

<table>
<thead>
<tr>
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<th>Par score</th>
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<tbody>
<tr>
<td>HR</td>
<td>84</td>
</tr>
<tr>
<td><strong>O2 sats</strong></td>
<td>98% on 28% Misty Ox / trache mask</td>
</tr>
<tr>
<td>BP</td>
<td>135/62</td>
</tr>
<tr>
<td>Temp</td>
<td>36.5</td>
</tr>
<tr>
<td>RR</td>
<td>14</td>
</tr>
<tr>
<td>GCS</td>
<td>E=4 V=T M=6</td>
</tr>
<tr>
<td></td>
<td>Total Par Score</td>
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*Then as anxious / desturating due to a plug of mucus*

<table>
<thead>
<tr>
<th></th>
<th>Par score</th>
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<tbody>
<tr>
<td>HR</td>
<td>staged increase to 110</td>
</tr>
<tr>
<td><strong>O2 sats</strong></td>
<td>85% on 28% Misty Ox / trache mask</td>
</tr>
<tr>
<td>BP</td>
<td>145/68</td>
</tr>
<tr>
<td>Temp</td>
<td>36.5</td>
</tr>
<tr>
<td>RR</td>
<td>20 increasing to 25</td>
</tr>
<tr>
<td>GCS</td>
<td>E=4 V=T M=6</td>
</tr>
<tr>
<td></td>
<td>Total Par Score</td>
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Chest baseline crackles

BM 5
Nursing Assistant Role (Plant)

Scenario

You’ve been handed over that Mr McDonalds is a 52 years old gentleman with history of polio and respiratory failure with long term tracheostomy (on TM) admitted 3 days ago to the ward with UTI requiring intravenous augmentin. He has made a good recovery with improving inflammatory markers and remains apyrexial for >24hours. He has no respiratory complaints with minimal secretions from his tracheostomy and currently on 28% Misty Ox. Worsening green secretions around the stoma site has been noted.

You’ve been handed over that he needs to have his routine trache care but you are starting to do his four hourly observations as you need a qualified nurse to do this. The nurse assistant is available to help you with this.

Underlying diagnosis

Recurrent UTI, Long term respiratory failure with Tracheostomy
Routine tracheostomy care

Instructions

You are a nursing assistant who can do things if you are told exactly what to do and contact anyone if told who and how.

Patient Role

Scenario

You are a 52 years old gentleman with history of polio and respiratory failure requiring tracheostomy / home ventilation. You were admitted to the ward 3 days ago with a urinary tract infection and has been having intravenous augmentin and has made good recovery.

Otherwise, you have no current complaint from chest point of view, with minimal secretions and on 28% Misty Ox. You are PEG fed, has long-term urinary catheter, has no sitting balance and need assistance with all daily care. No other PMH except for recurrent UTIs and is on long term prophylactic trimethoprim for this. Otherwise, no ETHO (alcohol), never smoked and you live with your sister with qds carers.

Underlying diagnosis

Routine tracheostomy care

Patient Instructions

You feel well and are cooperative to all instructions and responds appropriately.
Blood Results:

Name: David McDonalds  
Age: 52

FBC  
Hb  122  
WCC  11.5  
Plt  168

U&E  
Na  138  
K  4.1  
Urea  6.1  
Cr  52  
CRP  56

ABG Result: taken yesterday

Name: David McDonalds  
Age: 52

ABG  
pH  7.36  
pCO₂  5.6  
pO₂  11.1 on 28% FiO2  
BE  0.8  
HCO₃⁻  25  

Hb  120  
Na  136  
K  4.3  
Lactate  1.1