To Improve the Work Process of Nasal Gastric Tube (NGT) Taping on Patient

Singapore Healthcare Management 2019

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Background

There had been an increase in the number of medical related device nasal pressure injuries over last two years. Data collected between 2017 and 2018, showed an increased by more than 100%. Hence, This project was initiated to improve patient safety by reducing incidences in medical device related nasal pressure injuries.

Methodology

1. Identify Root Causes

Previous Situation

No Standardised Tape Used

- Different types of tapes were used

No Standardised Method

- Tubes anchored tightly at the nostril
- Tape get twisted and stick together

Leading to....

Medical Device Related Nasal Pressure Injury

- Pain
- Risk of infection
- Medical Cost

2. Solution Development

2.1 Solution Selection: Source & Evaluate Taping Materials

<table>
<thead>
<tr>
<th>Taping Material</th>
<th>Price/Gm</th>
<th>Stickiness</th>
<th>Adhesion</th>
<th>Sensitivity</th>
<th>Overall Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric</td>
<td>Rs 0.15</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Micropore</td>
<td>Rs 0.10</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Brown</td>
<td>Rs 0.09</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Silk</td>
<td>Rs 0.05</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>19</td>
</tr>
</tbody>
</table>

Other Tapes available in the market:

6. Solution Selection: Trial & Evaluate Best Method

- Butterfly Method
- Hinge Method

- Free allowance between the nares and nasal gastric tube pressure and risk of nasal injury

3. Solution Selection: Source & Evaluate Taping Materials

- Fabric Tape: Most effective, most value for money, least likely to cause skin sensitivity and is easily available.

Time Taken Daily to Nurse Nasal Pressure Injury

- 27 minutes To nurse minor injury
- 72 minutes To nurse serious injury

Results

1. ZERO Incidences with New Work Process.

- Medical Device Related Nasal Pressure Injury

<table>
<thead>
<tr>
<th>Year</th>
<th>Before (Butterfly Taping)</th>
<th>After (Hinge Taping)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>15min</td>
<td>9min</td>
</tr>
<tr>
<td>2018</td>
<td>27mins</td>
<td>1825</td>
</tr>
</tbody>
</table>

Total Time Saved 189 Hours per Annum

Intangible Benefits

- Improved Staff Morale
- Enhanced Teamwork for Holistic Patient Care
- Improved Patient and Care Giver Experience
- Reduced Unnecessary Complaints and Potential Lawsuits
- Maintain Professional Image of Hospital

Sustainability

- Training for existing and new staff
- Regular audit to ensure compliance of using Hinge Method
- Standardised Practice of NGT taping
- Collaborate with nursing policy council review on NGT
- Work with vendor to customise pre-cut tapes

Acknowledgement

- Ms Tay Ai Liu (Chief Nurse)
- Ms Foo Lee Lian (Assistant Director, Nursing )
- Ms Lay Sock Yee (QM Senior Manager)
- Ms Jacqueline Huo (QM Assistant Manager)

A trial on 50 patients from Nov to Dec 2018 received positive feedback that the Fabric tape is effective, skin-friendly, non-sticky and adhesive onto the nasal. Patient felt “more comfortable” during NGT taping removal

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