Outcome of a pre-discharge mouth care program for caregivers of immobile tube-feeding patients with cognitive deficits

(3 months from Oct to Dec 2016)

Speed presentation, HA Convention

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Mouth care for immobile patients with cognitive deficits is very challenging and time-consuming because they will close mouth tightly or bite. These are called ‘care-resistant behaviours’ (CRBs).

Actually, accumulated phlegm is one of their common problems. To avoid trauma for them, we usually withhold their mouth care. So, their poor mouth condition persists and they are at high risk for infection, pneumonia, decreases of quality of life, and increase of morbidity and mortality.
To enhance their mouth cleanliness, a pre-discharge caregiver mouth care program was piloted in our rehab setting.

This paper is to find out the program outcome in terms of:

1. Oral health score

2. Caregivers’ performance on:
   - Ability to assist mouth opening for patients
   - Phlegm cleansing techniques
   - Tooth brushing techniques
Subjects were:

* patients’ relatives or maids, who were able to:
  - provide regular direct mouth care to the patient
  - attend one 1 hour-edu session
  - Participate in at least two individual coaching sessions

Assessment tool was:

* The oral health score - to assess the health of lip, tongue, gum and mouth cavity.

Mouth Hygiene Management Sheet
**Education Content:**

**Part 1: individualized education talk**
- Dysphagia, aspiration pneumonia, pros & cons of nasogastric tube feeding
- How to use the mouth care product,
- Care-resistant barriers (CRBs) & assist mouth open
- the correct method of tooth brushing (DVD show)

**DVD - show tooth brushing method**
Part 2. Coaching session: to let carers practise how to use the products:

2.1 assist and keep mouth open

2.2 assist removing phlegm, debris and coating in the mouth:

- Open wide mouth rest
- Oral swab with sodium bicarbonate
- Cotton tipped applicator with plastic handle
- Tongue cleaner
- Toothbrush handle
2.3 brush teeth and clear interdental plaque
(use “NO tooth paste” and apply “mop and go technique”)

2.4 provide moisture

Glycerine applicator

Mouth moisturizer
**Participation rate:**
* Within the 3 months from October to December 2016, 11 family caregivers were participated in this program.
* All-sessions participation rate was 90.9%. (n=11)

**Ranking of mouth problems:**
* 1st: dental plaque 10 90.9%
* 2nd: dry mouth 7 81.8%
* 3rd: phlegm 6 54.5%

**Pneumonia cases:** 7 63.6%
**Cases having teeth:** 10 90.9%
It is found that the improvement was very little. The reasons may be:

1. The care-resistant behaviours (CRBs) make carers, including health workers, unable to open their mouth for cleansing. So, the poor mouth condition persists.

2. The increased sputum resulted from pneumonia accumulated thick in the mouth and make condition worse. It became more difficult to remove it without special products.

3. The carers or the health care workers were too busy to do the work two-persons together, when two-persons approach was needed.
After coaching session, caregivers’ performance in:

<table>
<thead>
<tr>
<th>Performance</th>
<th>N</th>
<th>Satisfactory</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ability to assist mouth open for patients with CRBs</td>
<td>N=7</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>2 Phlegm cleansing technique</td>
<td>N=10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>3 Tooth brushing technique</td>
<td>N=10</td>
<td>7</td>
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From the result, it is found that family carer could achieve the techniques after education and coaching session under supervision.

During the process, it is found that the problem may be difficult to arrange one more carer to assist the mouth opening for the whole care, or to provide frequent mouth care sessions.

The reason may be: both caregivers and health care workers were often occupied by multiple caring work. So, they may delay or omit mouth care when they found unable to manage their CRBs.
*In conclusion, the pre-discharge mouth care program can empower the caregivers’ skills in mouth care, especially tooth brushing. Besides, it is found that more support in dental problems, two-persons approach for CRBs management and effective phlegm cleansing are necessary.

*Future research is recommended to explore:

1. Effective strategies for managing CRBs to help cognitive deficit patients’ to open mouth willingly by 1-person approach
2. Efficient methods to brush the teeth and to clear phlegm
3. Effective ways to prevent and manage dry mouth
4. Caregiver satisfaction levels upon the education program
5. Clinical outcomes of pneumonia and mortality.
* Dalhousie University & Atlantic Health Promotion Research Centre (AHPRC). (2011). Brushing up on Mouth Care - an oral health resource for those who provide care to older adults.


* Mouth care assessment tool by Plymouth Community Health Care (provider of services of the NHS).

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