
Dysphagia Group project

— Improve Oral Hygiene Awareness —

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Our Clinical Centre

Caritas Day Care Centre for the Elderly - Tsuen Wan

- Provide day care support service for elderly aged 60 or above
- The elderly are assessed to be in state of moderate or severe level of impairment
 - Dementia
 - Parkinson's disease
 - Stroke
- Most of them have dysphagia and need diet modification



Observation

General: awareness of swallowing safety is adequate, human resources for feeding elderly in need are well allocated



Areas for Improvement

1. Elderly have poor oral hygiene

- Among the 8 clients assessed,
 - 6 have oral residue observed after breakfast and lunch
 - Half have decayed teeth

2. Poor knowledge in oral hygiene (both elderly and their caregivers)

- Only brush teeth once a day (morning)
- Some do not use toothpaste
- One client reported that he did not like brushing teeth
- For elderly with removable denture, they do not clean their mouth (only wash the denture)

Observation

3. Staff in center/Health care workers didn't notice oral hygiene problem

- Rely solely on caregivers
- No teeth cleaning service
- Rare dental checkup (once in few years)
- After mealtime, staff will not check oral residue nor ask the elderly to rinse out their mouth
 - Only feed them with water
 - For self-feeding elderly, only put a cup of water in front



Community Project - Goal

- **Target group:** Centre staff, the elderly and their caregivers
- **To raise their awareness on oral hygiene**
 - More willing to devote time on improving the elderly's oral hygiene
 - Minimize the individual and environmental barriers
 - Personal attitude
 - Individual attitudes of immediate family members
 - Individual attitudes of health professionals



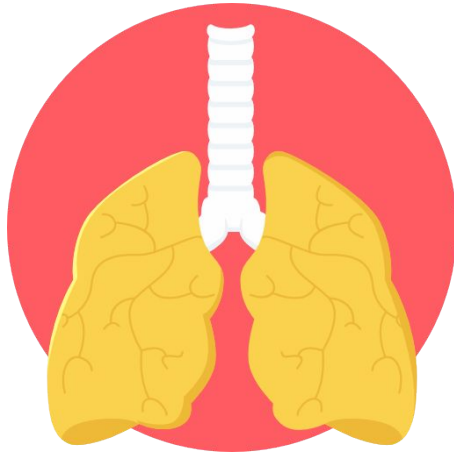
Community Project - Goal

- **To promote the elderly's quality of life**
 - Applying ICF model (World Health Organization, 2001), improve
 - Body structures
 - Structure of the mouth especially teeth, lungs
 - Body functions
 - Biting, chewing, oral swallowing, respiration functions, appetite
 - Activities and participation
 - eating, drinking
 - informal associations, ceremonies

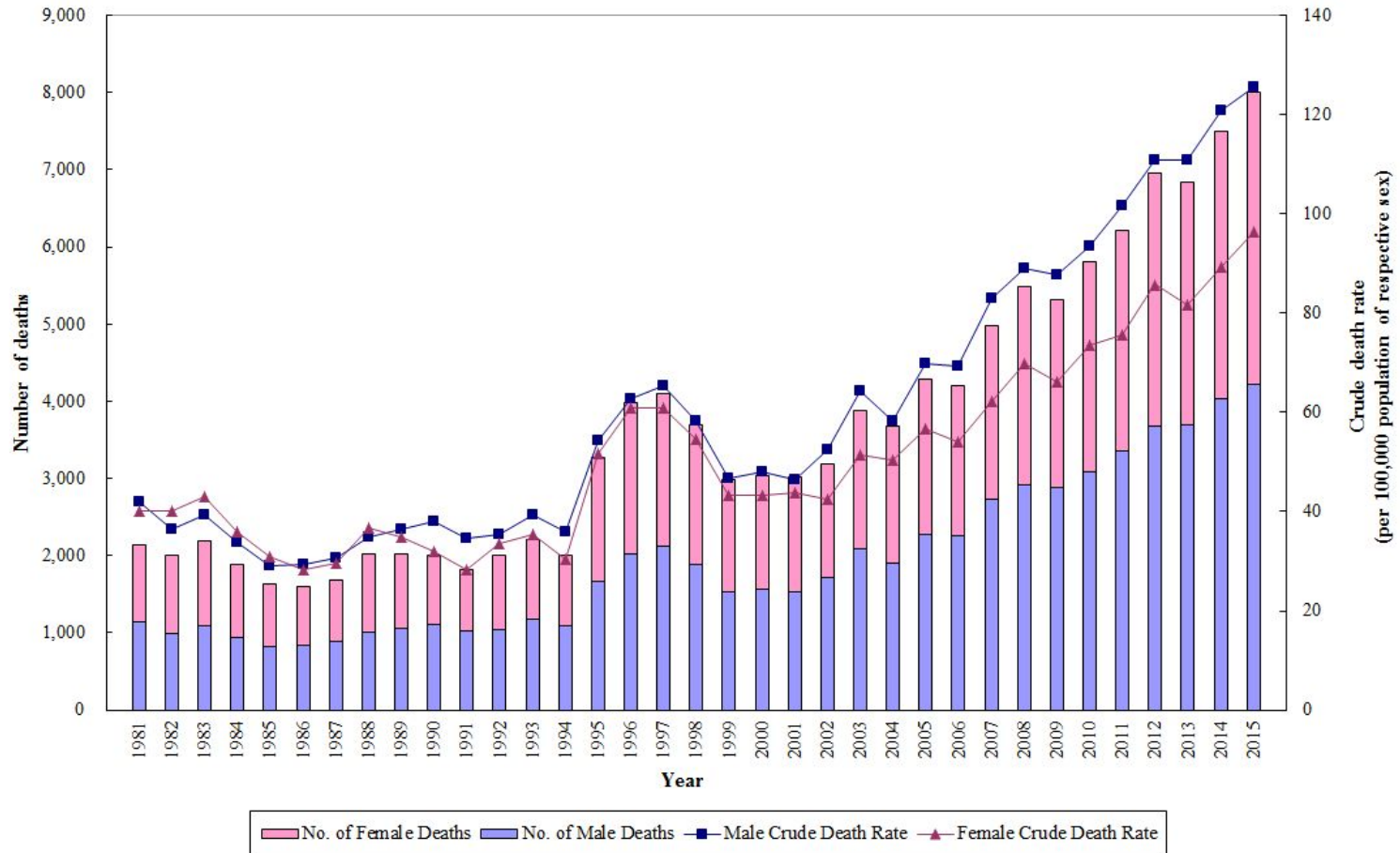


Community Project - Rationale

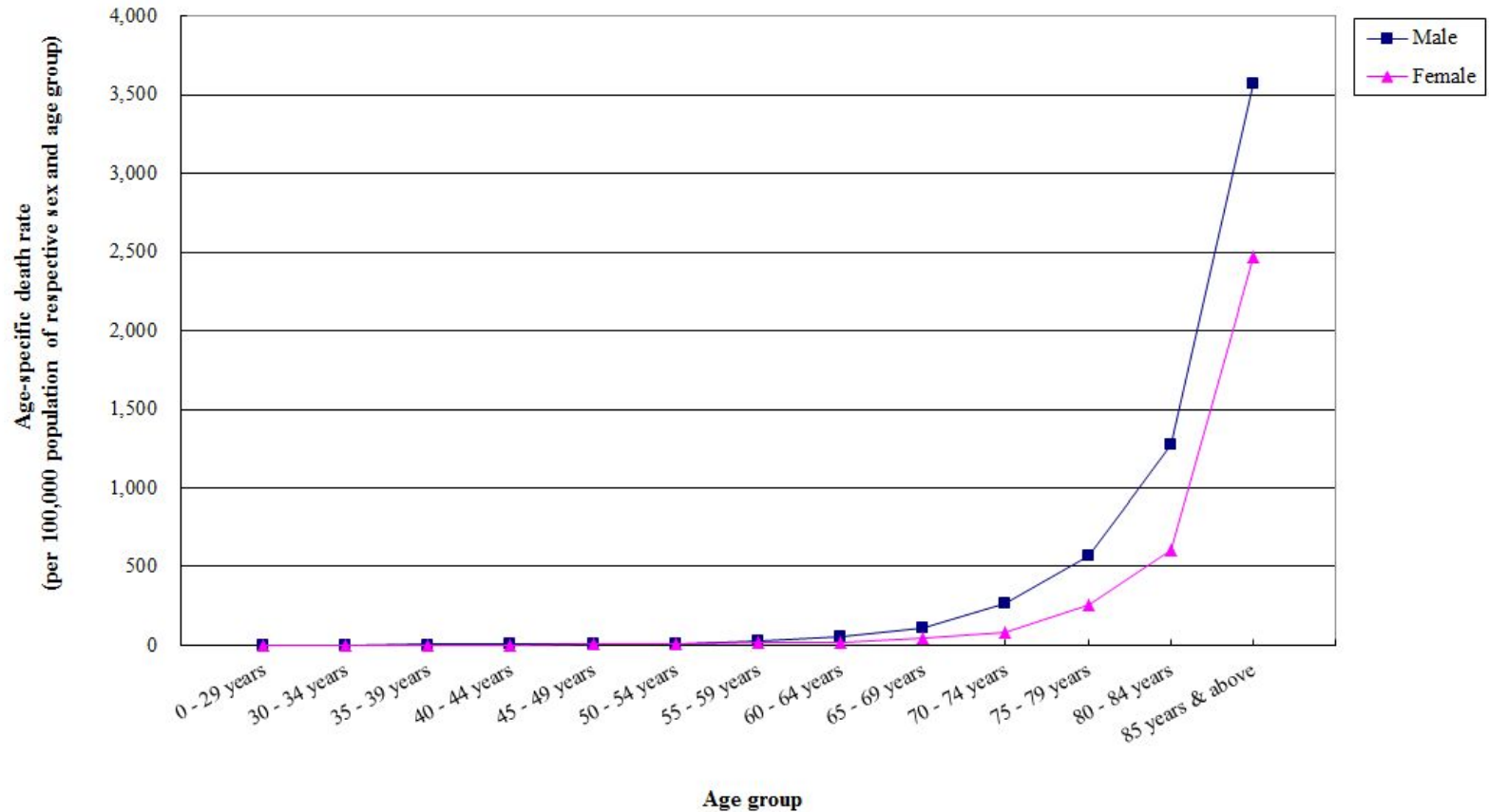
- **Pneumonia is a major threat to the older population**
 - second leading cause of death in Hong Kong in 2015 (8,004 cases)
(Department of Health, 2017)



Number of Deaths and Crude Death Rate due to Pneumonia, 1981-2015



Age-specific Death Rate due to Pneumonia, 2015



Community Project - Rationale

- **Langmore et al. (1998)** conducted a study on risk factors of pneumonia in 189 subjects with average age of 70
 - 21.7% incidence rate (41 developed pneumonia)
 - **Dysphagia** and **aspiration** were significantly related to pneumonia
 - Most critical risk factor was **poor oral hygiene**
 - E.g. brushing teeth rarely, excess residue, decayed teeth
 - Lead to more plaque and gingivitis
 - Increase the level of oral bacteria
 - Aspiration of oropharyngeal secretion (i.e. saliva) with high level of bacteria may then lead to lung infection

Community Project - Rationale

- A **systematic review** confirmed the effect of oral hygiene (Sjögren, Nilsson, Forsell, Johansson, & Hoogstraate, 2008)
 - 1 in 10 deaths from pneumonia may be prevented by improving oral hygiene

Improving oral hygiene is an important management strategy in patients with dysphagia to prevent pneumonia

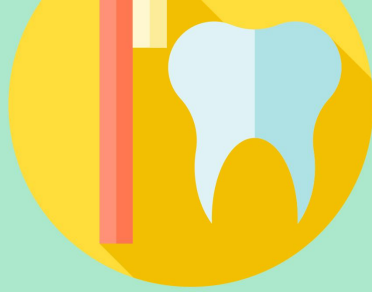


Community Project - Plan

- **Leaflet**
 - Distribute to centre staff and caregivers
 - Inclusion of swallowing anatomy and physiology
 - Impact of poor oral hygiene
 - Useful tools for maintaining oral hygiene
 - Misunderstanding regarding oral hygiene



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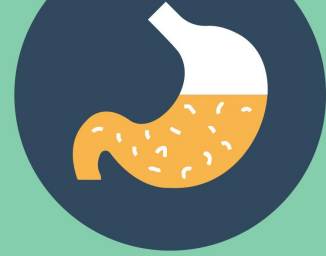


口腔衛生與吞嚥困難

香港大學言語及聽覺科學系學生



正常吞嚥



1. 口腔準備期

當食物或飲料進入我們口中時，口腔各部位如嘴唇、舌頭、牙齒、面頰和顎等部位會透過一系列的協調動作，利用咀嚼把食物磨碎，使其和唾液混合變成食團。雙唇在此階段會緊閉防止食物從口掉出。

2. 口腔期

在食團形成後，通過向後方推動，舌頭會把食團運送至口腔後方，準備進入咽喉。

3. 咽喉期

食團在抵達喉嚨後會引起吞嚥反射，即是咽部肌肉將收緊，會厭覆蓋氣管使其關閉，食道頂部肌肉則會張開。此動作藉著暫停呼吸，防止食物或飲料在吞嚥的過程誤入氣管。食物會在這階段從咽喉推進至食道。

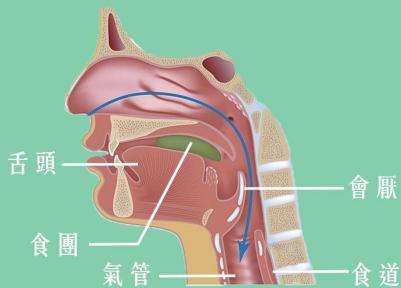
4. 食道期

透過食道的蠕動，食團會被移動至胃部作消化，開展吸收水分和營養的過程。

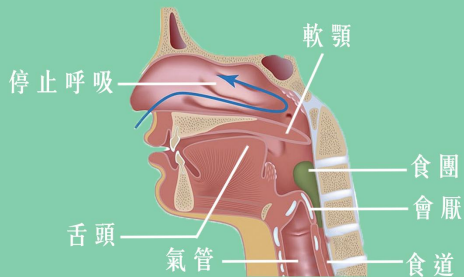
正常吞嚥

口腔準備期

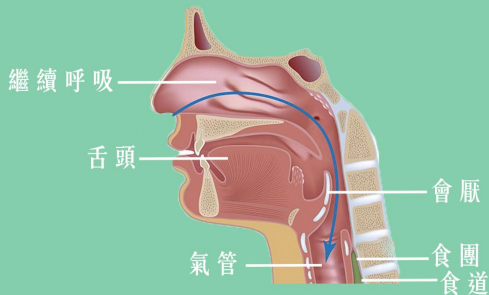
口腔期



咽喉期



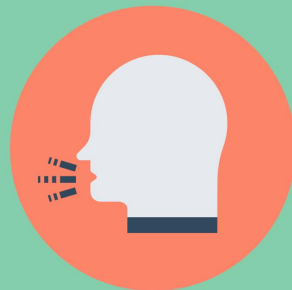
食道期



吞嚥困難

吞嚥困難的常見成因：

- 中風
- 認知障礙症（腦退化）
- 帕金森症



吞嚥困難的常見徵狀：

- 餐間或餐後咳嗽（「濁親」）
- 進食後食物殘渣仍留在舌頭上或散在口腔四圍
- 氣哽（俗稱「落錯格」）
- 口部肌肉感知減弱

吞嚥困難的併發症：

- 吸入性肺炎
- 營養不良
- 脫水
- 食物哽塞，導致窒息



吸入性肺炎是指由於外物(例如:食物、飲料、唾液)進入肺部而引的肺部感染。研究指出,八成的吸入性肺炎都患有吞嚥困難。不過,亦有研究顯示,著患者保持良好的口腔衛生,即使不慎誤嚥,患上吸入性肺炎的風險會顯著下降,因此,除了提供適當的治療外,保持口腔衛生對吞嚥困難患者同樣重要。

口腔衛生

導致口腔衛生情況欠佳的因素：

- 進食後忘記漱口或清洗口腔
- 刷牙頻率低
- 刷牙方法不正確
- 沒有定期檢查牙齒
- 食物殘渣積存在口腔內

口腔衛生情況欠佳會容易構成牙斑和牙齦發炎等狀況，引致口腔細菌滋生及蛀牙。當吞嚥困難的患者誤嚥細菌含量高的口咽分泌物（例如：唾液），有機會導致細菌感染及增加患吸入性肺炎的風險。

常用口腔護理工具：



牙刷：
清除牙齒表面的牙菌膜



牙線：
清除牙齒鄰面的牙菌膜



牙縫刷：
清潔寬牙縫兩旁的牙齒鄰面



單頭牙刷：
刷頭細小的牙刷，能有效清潔智慧齒和排列不整齊的牙齒



牙膏：
應使用含有氟化物的牙膏，能防止蛀牙、鞏固牙齒和抑制牙菌膜的滋長



口腔護理

為有牙齒的長者清潔口腔：

- 每天早上起床及晚上睡前以軟毛小牙刷刷牙
- 使用氟化物牙膏，防止牙菌膜形成
- 若長者失去部分牙齒，可用單頭牙刷圍繞著剩餘牙齒的貼近牙齦邊緣位置清潔
- 刷牙後，可用牙線棒和牙縫刷為長者分別清潔牙縫
- 長者刷牙時，家人可從旁觀察及協助，以確保他們沒有噎喉或誤吸風險
- 以乾淨的毛巾清潔長者口腔內積聚的唾液，以免他們噎到
- 牙刷應在使用三個月左右後更換，若期間患上呼吸道感染，應提早更換牙刷

為沒有牙齒的長者清潔口腔：

- 每天早晚都需要抹口一次；可以用紗布或乾淨的毛巾蘸上開水，擠出多餘水分，然後放入口中，先抹面頰，然後是牙齒、上顎、舌面、舌底，最後到咀唇

清潔假牙：

- 每天早晚用牙刷加少量洗潔精把活動假牙的底、面兩部分徹底刷乾淨
- 把清潔的假牙托放在清水中浸過夜



口腔護理



為抗拒刷牙的長者清潔口腔：

- 找出不願刷牙的原因，針對原因作幫助
- 若是因刷牙而不適，可能是由於牙齦發炎引致敏感感覺
- 可改用刷毛較軟牙刷，先刷一兩顆牙齒，待他習慣後再嘗試刷其他
- 請長者於不適時舉手示意，並即時停止刷牙，先稍作休息，切勿強行刷完整副牙齒

為有嚴重吞嚥問題/ 不清醒的長者清潔口腔：

- 不可用牙膏，只需以基本方法刷牙，並用牙線棒、牙縫刷或單頭牙刷清潔牙縫便可
- 由於這些長者不能漱口，刷牙後要把牙齒和口腔內其他部分都抹乾淨
- 如果沒有牙齒，只用濕紗布抹口便可

若長者刷牙時容易有想嘔吐的感覺：

- 可選用刷頭較小的牙刷
- 刷大白齒時只需刷到最後一顆牙齒，別把牙刷放得太後
- 若口腔內某部位容易因刷牙而有想吐感覺，應最後才刷

常見謬誤



謬誤：可以用牙膏清潔活動假牙
事實：牙膏的質地一般較為粗糙，容易令活動假牙的表面受損，令活動假牙更易藏污納垢。

謬誤：年紀大了，牙齒便會自然脫落
事實：晚年失去牙齒並非人生自然會發生的事。若能在口腔健康習慣方面作出改善，便可保持口腔健康，預防牙齒脫落。

謬誤：刷牙時要用硬的刷毛用力地刷才能徹底清潔牙齒
事實：用硬的刷毛或大力刷均會令牙肉萎縮，導致牙腳露出來，反而會令牙菌膜更易積聚於外露的牙腳，導致蛀牙，特別是牙根（牙腳）部位。

如欲知道更多，可於線上觀看以下短片：



https://youtu.be/hrAeW_87yso

如欲查詢更多，可預約言語治療師及牙醫進行評估或治療

Community Project - Plan

- **Video**
 - For centre staff, elderly and their caregivers
 - Supplement the leaflet information
 - More detailed explanation with animation and pictures
 - For elderly who is illiterate / has visual impairment
 - The video link is included in the leaflet
 - https://www.youtube.com/watch?v=hrAeW_87yso&feature=youtu.be



Course Learning Outcomes Achieved

1. Apply knowledge of the normal **anatomy and physiology** of swallowing to individuals with dysphagia;

- Explained the four phases of normal swallowing

2. Identify **health and medical conditions** that may lead to **dysphagia**;

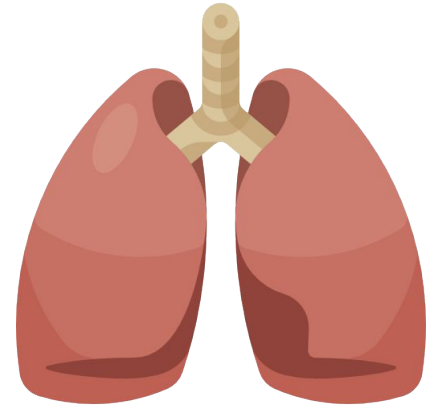
- Identified the group of people with high risks of dysphagia and the risk factors of aspiration pneumonia in the leaflet



Course Learning Outcomes Achieved

4. Differentiate **signs and symptoms of dysphagia** and propose appropriate diagnosis with justifications, adhering to the principles of the **ICF**

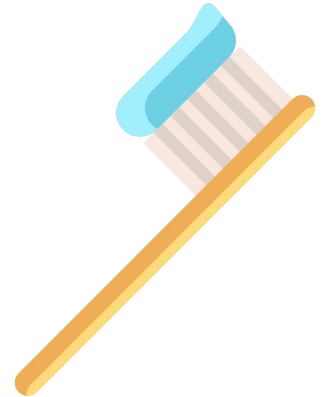
- Provided examples of signs and symptoms of dysphagia
- Explained how dysphagia may lead to aspiration and pneumonia
- Adapted the ICF



Course Learning Outcomes Achieved

5. Critically evaluate and demonstrate **evidence-based swallowing assessment and management** techniques and strategies for individuals with dysphagia;

- Suggested some management techniques and strategies with support of research studies to improve oral hygiene
 - Daily tooth brushing has been found to improve oral hygiene by 50% in older people with oropharyngeal dysphagia and reduced levels of aspiration pneumonia (Ortega et al., 2014)



Course Learning Outcomes Achieved

6. Recognize cultural and ethical issues in swallowing assessment and management, particularly those relevant to **Hong Kong**;

- Identified the quality of the health care services provided in Hong Kong during the mealtime observation
- Identified the lack of awareness in staff, elderly, and caregivers on oral hygiene and management of patients with dysphagia



Course Learning Outcomes Achieved

7. Describe the **roles of other professionals** in swallowing assessment and management;

- Suggest some management techniques that the nurses and feeding staff can implement to improve the elderly's oral hygiene
- Identified the role of speech therapists and dentists



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