

Stabilised Edible Foam (SEF) In ICU For Patients Experiencing Dysphagia: From Twitter To Reality.

39th BACCN
Conference
7th & 8th October 2024
Aberdeen



Lorraine Moxom
Sister & CNE
Intensive Care
Maidstone Hospital

Session Content

- “Is this Foam I see?” concept of Stabilised Edible Foam (SEF) commercially available as Biozoon / AIR with Flavour[®].
- Audience Poll.
- Explore effect of Dysphagia, Thirst, Dry Mouth and NBM status for our Critical Care population.
- How to deliver Biozoon for patient use.
- Visit barriers, hurdles, unforeseen benefits and future steps.
- Ask the Audience and Q&A.

Learning Objectives Mapped to CC3N Steps

1. Consider the impact on QoL and patient experience of being NBM, with reference to emotional, compliance, motivation, and therapy intervention. (Mapped to CC3N Steps 1:12.1; 2:1.7; 3:7.1).
2. Acquire the knowledge on incidence, risk factors and impact of Post Extubation Dysphagia (PED) in critical care on mortality and morbidity while recognising the importance of appropriate MDT referrals and own role in assessment. (Mapped to CC3N Steps 1:12.1; 2:8.1; 3:7.1).
3. Explore skills required to overcome barriers to implementation of quality improvement initiatives where empirical evidence is lacking or research limited. Discover how to employ 'The Habits of an Improver' (Lucus et al 2015) to meet the requirements of CC3N Step Four competencies. (Mapped to CC3N Steps 4: 3.1; 4:3.2; 4:3.3; 4:3.4; 4:3.7: 4:3.8).

Is this Foam I see?



Affordable &
UK supplier!
I was excited to
try it with our
patients!



Lorraine Moxom · Jun 23, 2022

Please explain what is it I am seeing a foam of some sort? 🤔

1 1 1



Carmel Richardson @carmel_mcnamee · Jun 23, 2022

Yes @BiozoonUK product is "AIR with Flavour" & creates light airy foams, designed for people who have difficulty swallowing. It provides taste which is obviously great for patients who are NBM but we are also exploring using it in oral stimulation swallow therapy programmes

2 2 7



Lorraine Moxom (Frescosiam) @frescosiam · Jun 23, 2022

Amazing thanks for the info. I will mention to our SALT I expect it is very expensive though. Would be great for our long term pts.

1 1

What is it?

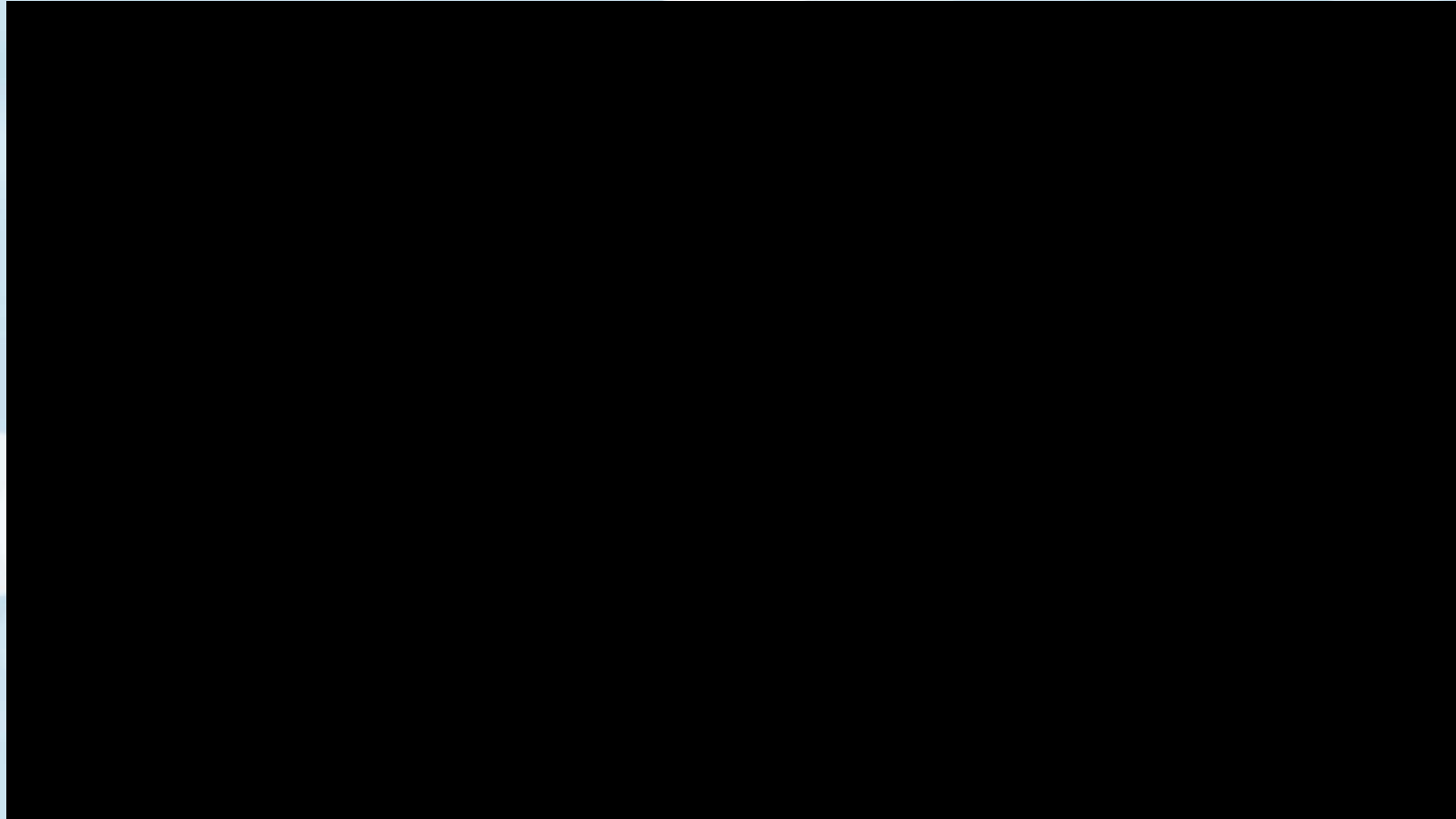
- Stabilised Edible Foam (SEF) commercially available as Biozoon / AIR with Flavour[®].
- A foam designed for persons who are nil by mouth due to severe dysphagia.
- The pleasure of taste from a fluid without the eating and drinking risk.



Anyone for bubbles?

Maltodextrin and ***Soy**
Lecithin, emulsify the liquid
and stabilise the foam

- Vegetable-based unflavoured powder
- Suitable for Vegans and Vegetarians, Gluten and Lactose Free



* Allergy checks assessed prior to use **Soy or Soya allergy** is a Contraindication

What's your the patient's Flavour?



Tips for tastes:

- Concentrated syrups retain more flavour.
- Stronger flavour. when bubbles left to stand.
- Cool hot liquids.
- Dilute alcoholic and sweet drinks to improve foaming.
- Metal spoon affects taste with fizzy liquid.

Almost any liquid can be foamed
(e.g. juice, soup, coffee, wine, beer, curry sauce, gravy etc)

Who is it for?



- Any patient identified by SLT as having severe dysphagia and unsafe for oral trials
- Nil by mouth awake ICU patients with Dysphagia following extubation or with Tracheostomy
- Patients who are NBM Enteral, Parenteral or PEG fed
- Dysphagia following Stroke or traumatic brain injury
- Palliative care – taste for pleasure

Prior to any patient having Biozoon, suitability will be confirmed by ICU Consultant and SLT.

Benefits

- May assist in rehabilitation producing quality dry swallows.
- Lower aspiration risk compared with a bolus of a teaspoon of fluid.
- Enjoyment of taste to enhance QoL for NBM patients on ICU with severe dysphagia.
- Experiencing flavour can bring positive emotional responses including pleasure and comfort.
- Enjoyment of flavour may increase compliance with NBM, especially in delirious patients.
- Able to taste with tracheostomy cuff up, down or with one-way valve.

Concerns

- **Aspiration** - Tiny amount of residue (skin of bubbles made from fluid).
- No Increase in frequency of chest infections found in small (unpublished) trial at RHN.
- Accidental administration of medication.
- ‘Everyone will be requesting bubbles!’

Where is the evidence?



- Since launch in 2018, Biozoon supplies care homes and 28 NHS settings in the UK.
- Marketed as a (QoL) product.
- **Not** a Medical Device.
- No clinical evidence on effectiveness currently published.

(There is less liquid on a spoonful of foam than in natural saliva production).

[\(AIR-with-Flavour-Information-Sheet-1.pdf \(biozoon.uk\)\)](#) Accessed: 11/02/2023

What do you mean no evidence?



- Hepper et al (2022) Healthcare Professionals' Perceptions of Stabilized Edible Foam with Adults with Severe Dysphagia; an exploratory study.
- A study on dynamics of foam in the food industry
- Experience from local network enquiry - 3 other trusts were considering or had purchased, use of Biozoon was mostly SLT led.
- Enquiry made to SLT teams who were sharing use on social media

Audience Poll

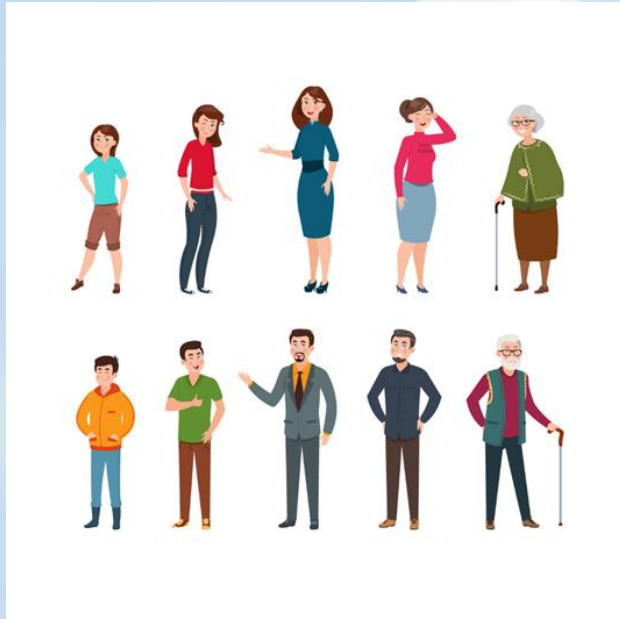
Please use the QR code to complete the anonymous poll.

Thank you

Audience Poll BACCN Presentation
7th Oct 2024



Habits of an improver- Learning (Lucas et al 2015)

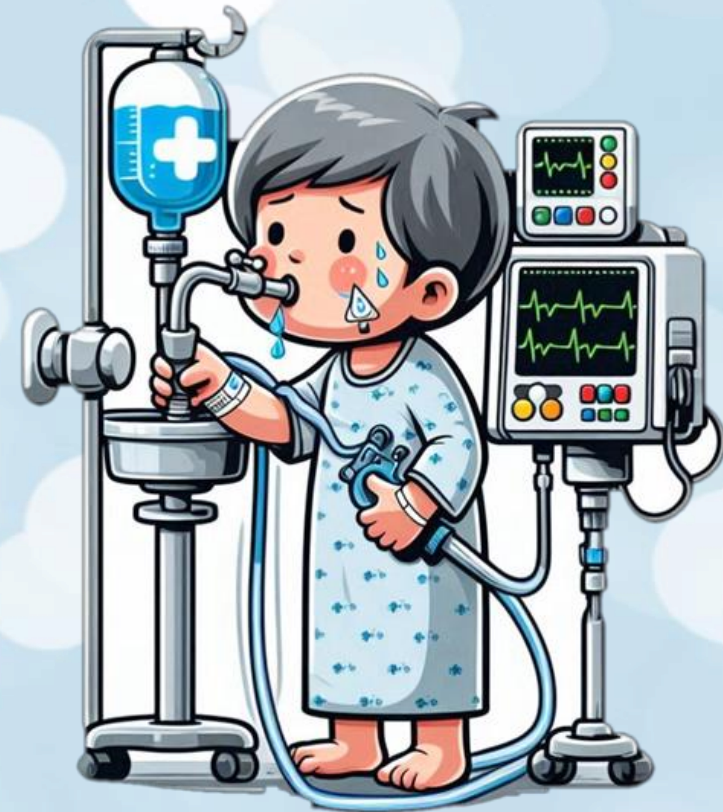


- Knowing the problem
- Post Extubation Dysphagia up to 60%
- Risk factors
- Mortality- Independent predictor (DYnAMICS trial 2017)
- Mortality effect continued up to 1 year
- Patient experience

Based on a six-month figure estimated approx. **30-40** patients per year could benefit from SEFwhile NBM

Habits of an improver - Readiness to change

- Increase in Risk Behaviour while NBM-patient attempts to drink from the sink?
- Dehumanizing- linked to freedom (Todnes et al 2009)
- Feelings of powerlessness, anxiety and desperation(Kjeldsen et al 2017).
- 70% recalled thirst in a weaning centre (Rose et al 2014)



AI generated image the computer understands experience of Thirst **only 50 %** of nurses perceived it as a problem (Landstrom et al 2009)

Risk Management - Built in

Prepare the foamed taste as per the instructions overleaf.

NB: Ensure only the foam is given, not the fluid underneath.

**** DO NOT GIVE THE TASTES IF ANY CONCERNS RE: CHEST HEALTH/ CHEST INFECTION AND INFORM SLT ****



STOP IF THE FOLLOWING OCCURS and advise Nurse in Charge:

Repeated Coughing; Wet voice; Desaturation, Excessive salivation.



SPECIAL INSTRUCTIONS:

Mouth care: Pre & Post Taste Session.

Ensure upright and alert for all tastes.

Use yankauer to suction the mouth before/during/after the tastes to manage any increase in the amount of saliva produced.

Aspirate subglottic Tracheostomy port pre & post taste if applicable.

NAME: _____		Maidstone and Tunbridge Wells NHS NHS Trust
NHS number: _____		Speech and Language Therapy Swallow Advice
Date of birth: ____-____-____		
BIOZOON TASTE MENU		
Allergies: (Air instant powder contains Soya and Maltodextrin. Note: Soya is an allergen)		
DRINKS to be foamed for Tastes:		
		
Amount: _____ teaspoons of foam. Frequency: _____ hourly.		
Prepare the foamed taste as per the instructions overleaf. NB: Ensure only the foam is given, not the fluid underneath.		
** DO NOT GIVE THE TASTES IF ANY CONCERNS RE: CHEST HEALTH/ CHEST INFECTION AND INFORM SLT **		
		
STOP IF THE FOLLOWING OCCURS and advise Nurse in Charge:		
Repeated Coughing; Wet voice; Desaturation, Excessive salivation.		
SPECIAL INSTRUCTIONS:		
<u>Mouth care:</u> <u>Pre & Post</u> Taste Session. Ensure <u>upright</u> and <u>alert</u> for all tastes. Use yankauer to suction the mouth before/during/after the tastes to manage any increase in the amount of saliva produced. Aspirate subglottic Tracheostomy port <u>pre & post</u> taste if applicable.		
Assessed by: _____	Signature: _____	
Date: _____	Bleep / extension: _____	
<small>Please ensure this prescription is filed in the notes on transfer to ward. Version 1 adapted from Royal Hospitals for Neuro-disability resources 2023</small>		

Making Biozoon Foam:

Equipment Needed:

- The air pump with silicone tube (Not disposable)
- Disposable single use pipette
- 1 sachet of 'instant air' powder (per cup of liquid)
- Chosen liquid to be foamed
- Plastic spoon (metal negatively affects taste)
- Clean beaker or paper cup
- Working suction and a Yankauer

- Attach the silicone tubing from the air pump to the disposable pipette.
- Pour approx. 50 ml of drink into a clean beaker or cup.
- Add the 'AIR instant' powder to the drink and stir well.
- Put the end of the pipette in the drink and turn on the air pump to create the foam.
- Stop the air pump when the foam fills the beaker.
- Scoop off the foam using a plastic spoon to and give to the patient.
- You can re-foam the drink as many times as needed.
- Throw the pipette away after use. (NOT the silicone Tube).
- Clean the pump and tubing with clinell wipes, wash up beaker.

Contact Speech & Language Therapy if any questions

Please note: Ensure only the foam is given, not the fluid underneath.

Tips for the best tastes:

- Ask patient and family what are their favourite flavours.
- Sweet or savoury liquids can be used
- Concentrated liquids and syrups retain more flavour within the foam bubbles.
- Hot liquids will need diluting and cooling.
- Alcoholic drinks will need diluting to help foaming.
- Metal spoons affect taste especially with fizzy liquid.

Please ensure this prescription is filed in the notes on transfer to ward.
Version 1 adapted from Royal Hospitals for Neuro-disability resources 2023

Saliva



- **Increase in Saliva** - Suction is available.
- Saliva management medication (Hyoscine patch) if severe.
- No exclusion criteria found for use due to saliva (Royal Hospital for Neuro-disability).
- Expect some increase in saliva as a normal gustatory response.
- Not always a negative thing, increased saliva may reduce dry mouth sensation often experienced by those NBM.

Habits of an Improver - Team player



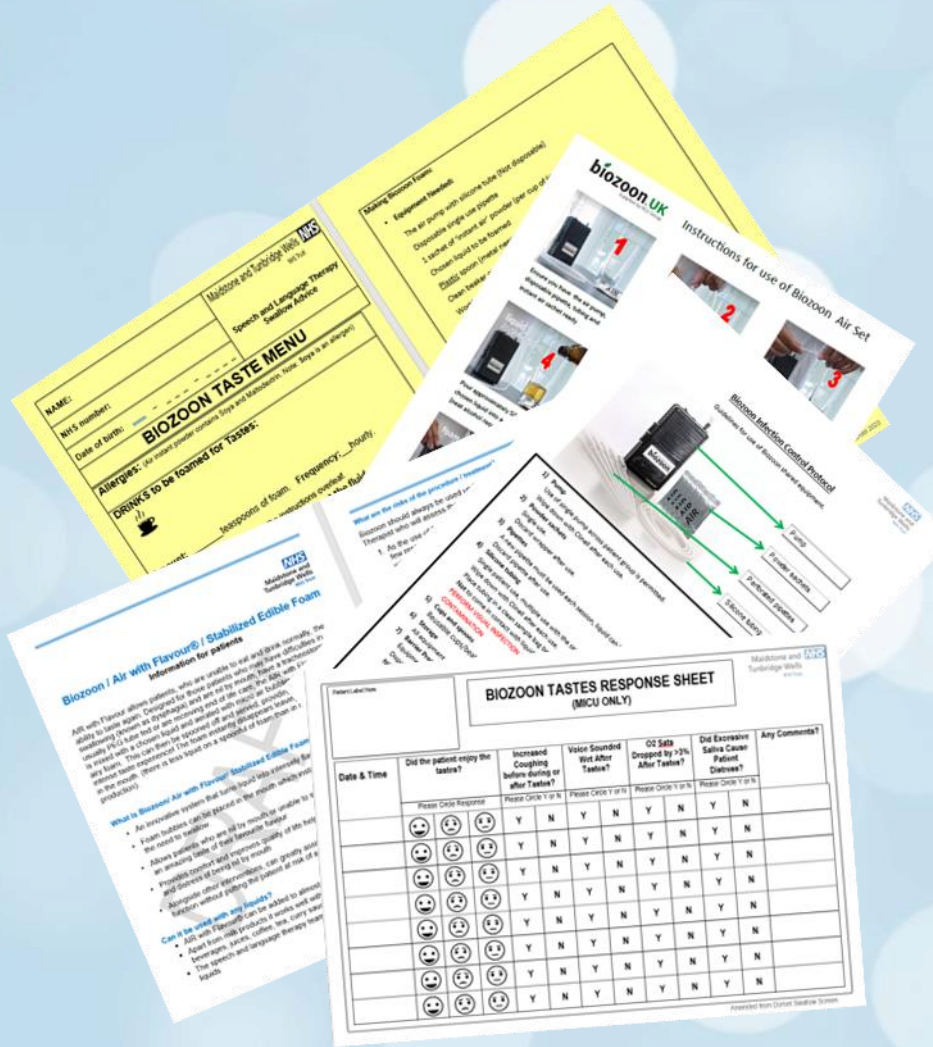
**WE NEED
YOU!**

To Help with a
Pilot on BIOZOON

- Only possible due to SLT involvement.
- Lucky to have a Highly Specialist Critical Care SLT.
- Presented to Therapy Clinical Governance
- Stimulated questioning and discussion
- Staff Taster session



Habits of an improver - Creativity



- SOP, Assessment Criteria, Contraindications and Exclusions.
- Medical Device Competency.
- Biozoon Risk Assessment.
- Biozoon Taste Menu.
- Biozoon Infection Control Protocol.
- Patient Information Leaflet- trust format.

Habits of an improver - Influencing

- New ways to network
- Promoted Swallow Rehabilitation potential
- Financials-cost per taste 74p
- Accepted by Surgical Governance Board & Interventional Committee 2023
- Problem solve lack of research- FEES



Vocal Cords seen via FEES

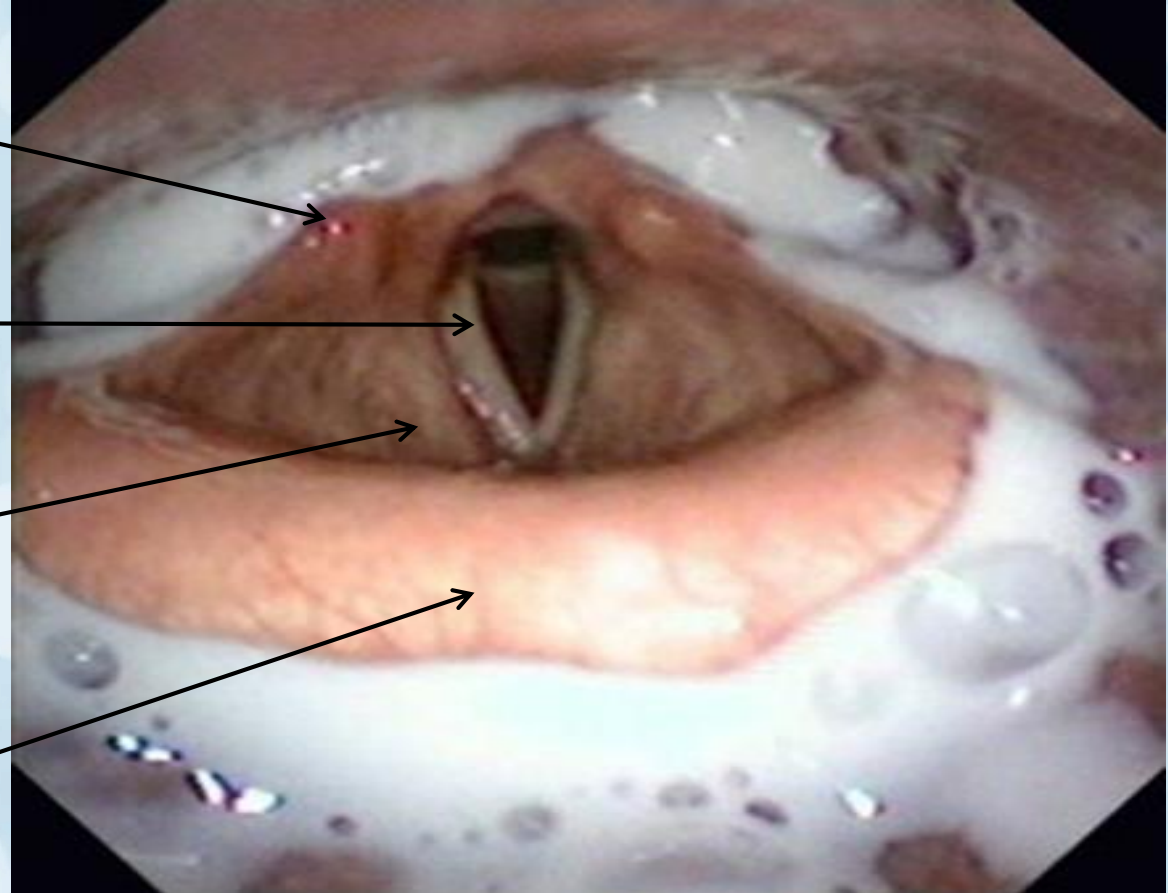
(Fibreoptic Endoscopic Evaluation of Swallow)

Arytenoid Complex

True Vocal Cords

False Vocal Cords

Epiglottis



Blue Water seen via a FEES (Permission to use images)



Biozoon seen via a FEES (Permission to use images)



Habits of an improver - Resilience

- One patient's experience drove me to push on through the barriers.
- Family involvement vital as no process to support use by nurses.
- Motivation of parent to give their child a pleasurable experience.
- Carers also negatively affected by social isolation aspect of long-term NBM
- Patient ambassador – keen to participate in provision of feedback

* Story and images shared with consent



Biozoon Pint at the Rovers Return on Coronation Street 2024

Ask the Audience?

Please share tips on implementing projects where empirical evidence is unavailable.

How do you get around the lack of data?

Benefit of Hindsight (or Mistakes We learnt from!)

- Interventional Committee
- Presented in same meeting as stents!
- Over Medicalized – NOT a medical device
- Limited ourselves to Pilot
- Once agreed upon Pilot committee would not waver
- Let it go, Let it go! 🎵
- SLT take to stroke
- Involve Palliative Care for patient experience perspective

Big Spanner

- Staff training to begin July 2024
- MHRA Yellow Card Safety Report circulated via SLT Networks June 2024
- One UK hospital trust reported an exploded battery after removal from device. This potential battery misplacement led to some Trusts removing device from use.
- RGS UK responded and revised hospital use guidance.



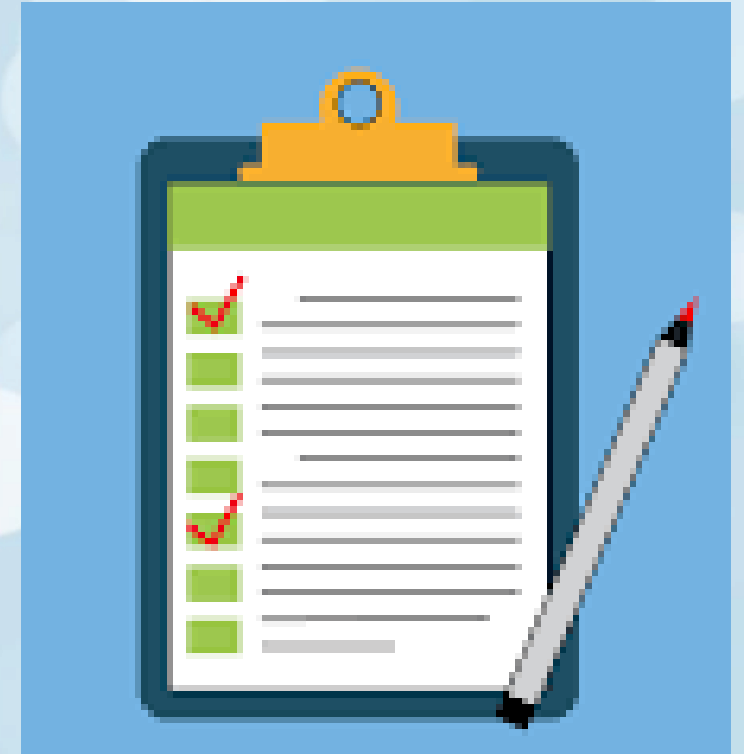
Unexpected Benefits to the Unit



- Closer links with MDT - presented at Therapies Governance
- SLT teaching on ICU Team days
- Multi-disciplinary team care essential to deliver quality care to this vulnerable cohort (McGrath et al 2015)

Future for Biozoon across trust.....

- Future QIP across Trust SLT led
- Collaborate with Stroke Service to increase study numbers
- Re-visit Research Team
- Investigate grants, ethical agreement





Thank you so much

my inspiration  in memory of Jett

* Story and images shared with consent

Exceptional people,
outstanding care

@MTW_MICU

#BACCNConf2024

@BiozoonUK

NHS

Maidstone and
Tunbridge Wells
NHS Trust



Please email if you would like the references
or documents developed for Biozoon

lorraine.moxom1@nhs.net