



Welcome to the 2nd UK IDDSI Festival

We are so happy you can join us today!





Update and Impact of IDDSI Julie Cichero

Co-Chair IDDSI Research Compliance Manager, Mater Research, Australia Hon. Sen. Fellow, School of Pharmacy, UQ, Australia Adj. Prof., School of Clinical Sciences, QUT, Australia





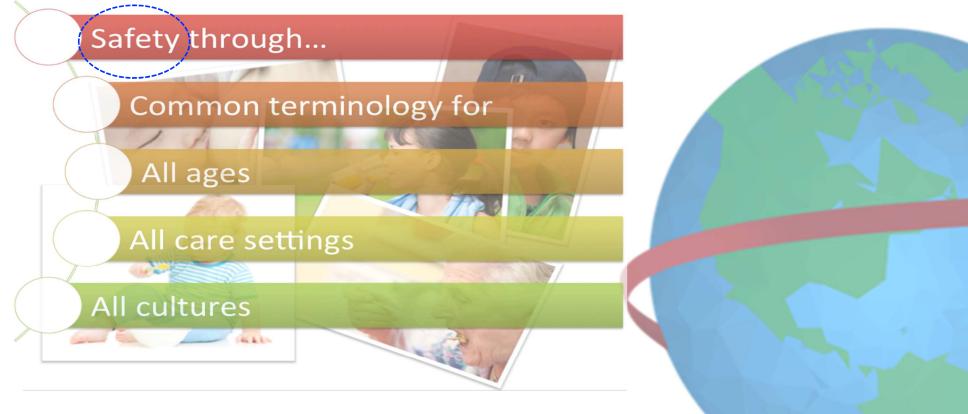
Speaker Disclosures

- IDDSI, Co-Chair
- IDDSI Board member
- Consultant to Industry
- Provides paid professional education





Why are we here?



© 2022 used with permission from IDDSI



Patients 'choked on hospital soft food'

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() 27 June 2018
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Dr Kathy McLean, executive medical director at NHS Improvement, said: "Vulnerable patients have died or been harmed because there is confusion in the way people describe what type of food is suitable for those with swallowing or chewing difficulties.

NHS Improvement now wants all NHS staff to use clearly categorised food textures - as published by the International Dysphagia Diet Standardisation Initiative - to make sure patients are fed safely and correctly according to their individual needs.







<u>Choking</u> is the second highest cause of preventable death in aged care (AU)



True extent of problem not known

assaults and medication errors

"We found 3,000 deaths in the Coroner's cases that we consider premature and preventable," said Professor Joe Ibrahim, whose team analysed nursing home deaths over the past 15 years.

The study shows falls, choking, suicide, assaults between residents and medication errors are all causing premature deaths in nursing homes.

"We're not advocating that people should live forever," Professor Ibrahim said.

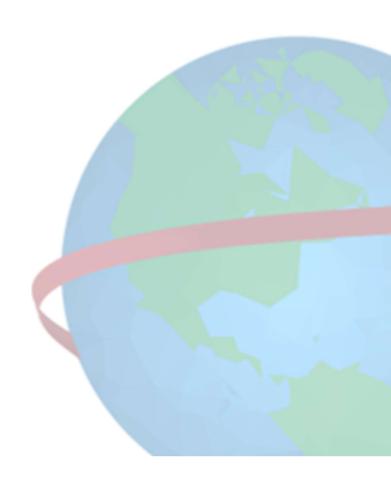
"We're simply saying that if you die because of someone else's action or because of someone else not taking an action that they should have and you die from an injury, that ought to be known and that ought to be prevented."

He said the true extent of the problem was not known as no data is collected on injuries.



PHOTO: Professor Joe Ibrahim says the 3,000 preventable deaths may just be the tip of the iceberg. (ABC News)

"All we've done is look at the tip of the iceberg," he said.



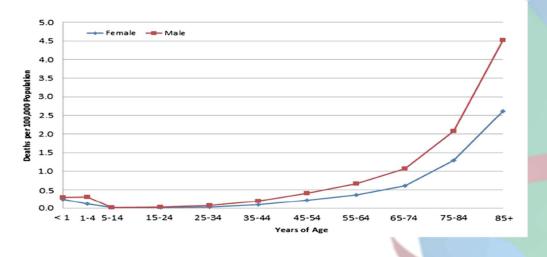


Choking deaths increase as we age Kramarow, 2014, Injury Prevention, 20:200-203



Figure 1 Death rates for accidental suffocation caused by inhalation or ngestion of food, by age and sex: JSA, 2007–2010. Source: CDC/NCHS/ Vational Vital Statistics System, 2007–2010. Note: Rates shown are for food suffocation as an underlying cause of leath.

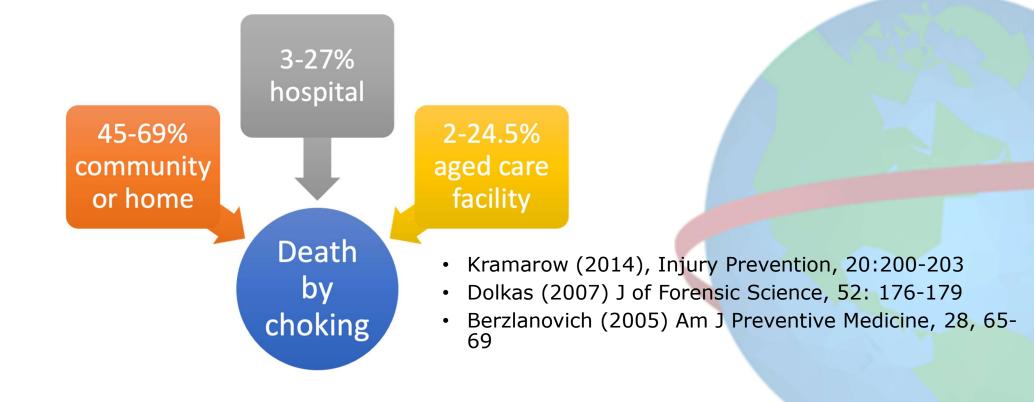
Incidence of choking is nearly 7x higher in people >65yrs than children aged 1-4 yrs...





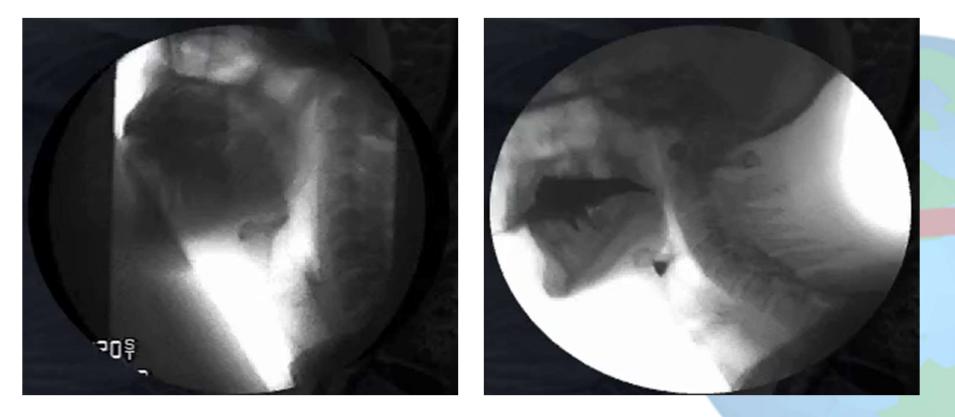
Death by Choking: Location







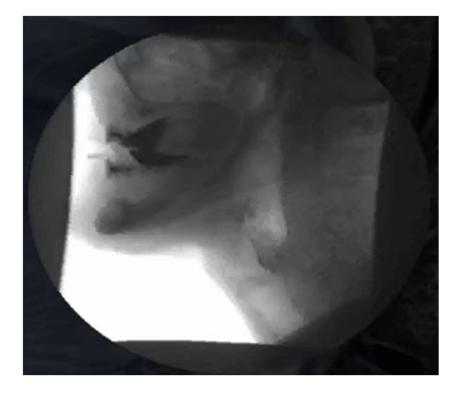
As clinicians, we've been taught < to focus on liquids





Now, we are also looking at solids

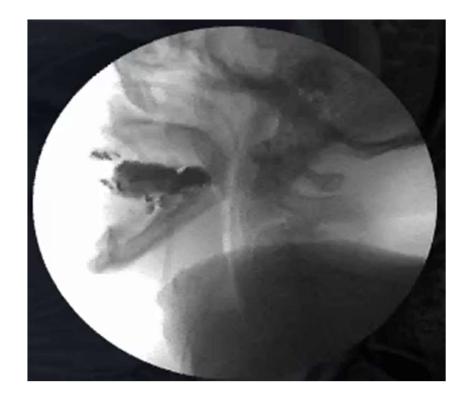


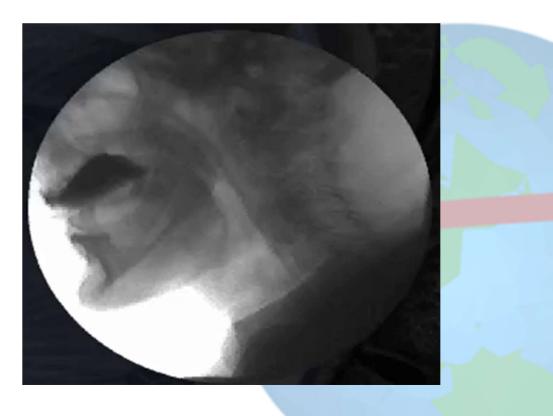












Standardisation of terminology, International Dysphagia Die Standardisation Initiative description and testing DDS methods FOODS TRANSITIONAL FOODS REGULAR NOT a 'prescription' **EASY TO CHEW SOFT & BITE-SIZED** 6 **MINCED & MOIST EXTREMELY THICK PUREED** LIQUIDISED **MODERATELY THICK** 3 **MILDLY THICK SLIGHTLY THICK** $\mathbf{0}$ THIN DRINKS







How thick is "thick"? How soft is "soft"? How small is "small"? IDDSI includes specific measurements that minimise the need for personal subjective judgement





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Measuring the impact of IDDSI

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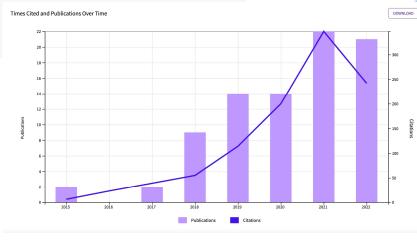
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Analyze Results

DDS

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Food science, Otolaryngology, Applied Chemistry, Rehabilitation, Paediatrics, Nutrition + Dietetics, Pharmacy, Geriatrics







IDDSI is increasing our knowledge of dysphagia



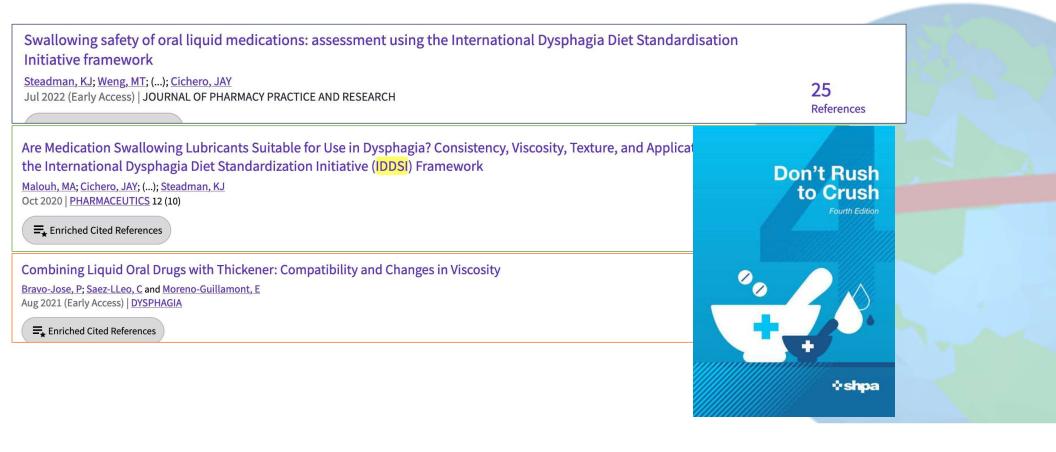






We also swallow medicine... what thickness is liquid medicine?







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We now know more about the thickness of liquid barium

Characterizing the Flow of Thickened Barium and Non-barium Liquid Recipes Using the IDDSI Flow Test.

(includes abstract) Barbon, Carly E. A.; Steele, Catriona M. Dysphagia (0179051X), Feb2019; 34(1): 73-79. 7p. (journal article - research) ISSN: 0179-051X PMID: NLM29948262

2. The standardizing texture of thickened barium stimuli in the videofluoroscopic swallowing study at a medical center in Taiwan.



(includes abstract) Cheng, Chien-Hui; Chen, Hui-Chuen; Chen, Jo-Yu; Chang, Yeun-Chung; Wang, Tyng-Guey Journal of the Formosan Medical Association, Feb2022; 121(2): 563-565. 3p. (journal article) ISSN: 0929-6646 PMID: NLM34348866

Diagnosis and Management of Swallowing Physiology: Standardized Contrast, the MBSImP (TM), & the IDDSI Framework Steele, CM; Martin-Harris, B; (...); Allen, SE May-jun 2021 | APPLIED RADIOLOGY 50 (3), pp.1-11



We know more about the thickness of infant milk and its flow through teats





24. Effect of Formula Type and Preparation on International Dysphagia Diet Standardisation Initiative Thickness Level and Milk Flow Rates From Bottle Teats.



(includes abstract) Pados, Britt F.; Feaster, Victoria American Journal of Speech-Language Pathology, Jan2021; 30(1): 260-265. 6p. (Article - research, tables/charts) ISSN: 1058-0360

Subjects: Deglutition Disorders Diet Therapy; Diet Standards; Infant Formula; Bottle Feeding; Nipples; Milk; Female; Male

Acadomi

21. Clinical Focus: Findings and Clinical Implications for Thickening Formula With Infant Cereal Using the International Dysphagia Diet Standardisation Initiative Flow Test.



Journal

(includes abstract) Stevens, Melanie; O'Rourke, Sara; Casto, Shelley Coleman; Benedict, Jason; Lundine, Jennifer P. American Journal of Speech-Language Pathology, Jul2022; 31(4): 1601research, tables/charts) ISSN: 1058-0360

Subjects: Deglutition Disorders Diet Therapy; Diet Standards; Infant Formula; Cereals



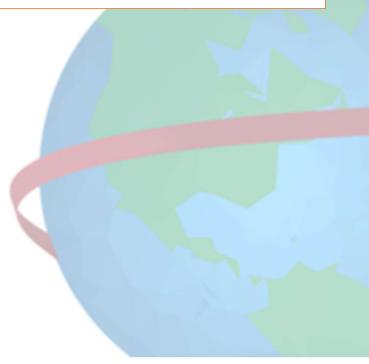


We are seeing international adoption

25. How Accurate Are the Consistency Labels Used in Hong Kong? An Objective Study of the Consistency of Thickened Liquids Using International Dysphagia Diet Standardisation Initiative and Consistemetric Measurements.

(includes abstract) Wong, Long Yat; Ng, Manwa L.; Tong, Eric T.S. Folia Phoniatrica et Logopaedica, May2022; 74(3): 167-175. 9p. (Article - pictorial, research, tables/charts) ISSN: 1021-7762

	1. Thickened Liquids Using Pureed Foods for Children with Dysphagia: IDDSI and Rheology Measurements.					
	Academic Journal	Brooks, Laura; Liao, Jianshan; Ford, Jaclyn; Harmon, Sarah; Breedveld, Victor Dysphagia (0179051X), Jun2022; 37(3): 578-590. 13p. (Article) ISSN: 0179-051X				
		nentation Strategies for the International Dysphagia Diet Standardisation Initiative (IDDSI), Part I: Quantitative Analysis of IDDSI Ince Among Varied Participants.		¢		
		(includes abstract) Rule, David W.; Kelchner, Lisa; Mulkern, Ashley; Couch, Sarah; Silbert, Noah; Welden, Kathy American Journal of Speech-Language Pathology, Aug2020; 29(3): 1514-1528. 15p. (Article - questionnaire/scale, research, tables/charts) ISSN: 1058-0360				
	Academic Journal	Subjects: Quantitative Studies; Task Performance and Analysis; Health Knowledge; Deglutition Disorders Diet Therapy; Program Implementation; Nomenclature Classification; Diet Methods; Adolescent: 1: years; Adult: 19-44 years; Middle Aged: 45-64 years; Aged: 65+ years; Aged, 80 & over; Male; Female	3-18			
		Show all 12 Images Image: Image I				
	3. IDDSI (饮食指导在脑卒中吞咽障碍病人 中的应用.		¢		
V		(includes abstract) 罗冬华; 张晓梅; 曹猛; 吴永明 Chinese Nursing Research, Nov2021; 35(21): 3928-3931. 4p. (Article - tables/charts) ISSN: 1009-6493 Subjects: Deglutition Disorders; Stroke; Quality of Life				
	Academic Journal	Get It at UQ Library				







Evidence for IDDSI testing methods: Liquids

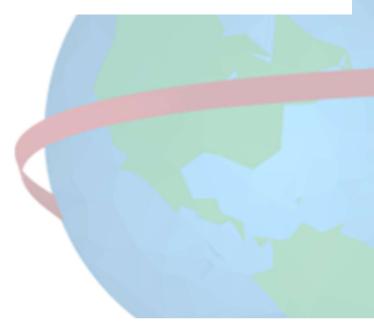
Experimental and Computational Investigation of the IDDSI Flow Test of Liquids Used in Dysphagia Management

Hanson, B; Jamshidi, R; (...); Steele, CM Nov 2019 | ANNALS OF BIOMEDICAL ENGINEERING 47 (11), pp.2296-2307





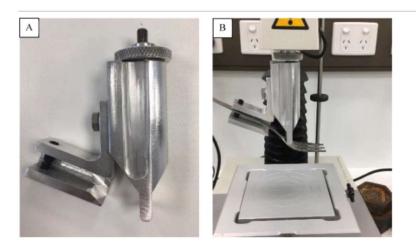
Gravity flow test comparisons for mildly thick consistency Garcia, JM; Chambers, E and Noll, KS Apr 2020 | Oct 2019 (Early Access) | JOURNAL OF TEXTURE STUDIES 51 (2), pp.308-313







Evidence for IDDSI testing methods: Food



Instrumental method for International Dysphagia Diet Standardisation Initiative's (IDDSI) standard fork pressure test Pematilleke, N; Kaur, M; (...); Torley, PJ Aug 2022 | JOURNAL OF FOOD ENGINEERING 326

Attachment designed to fix any type of fork/spoon to food texture analyser. Max 23 N force ... validation...





Food technology is embracing IDDSI

Instrumental texture assessment of IDDSI texture levels for dysphagia management. Part 2: Texture modified foods

Hadde, EK; Prakash, S; (...); Chen, JS Jun 2022 (Early Access) | JOURNAL OF TEXTURE STUDIES

➡ Enriched Cited References

Texture-modified foods and thickened fluids play a major role in clinical treatment for individuals who suffer from swallowing difficulties (known as dysphagia). International Dysphagia Diet Standardization Initiative (IDDSI) developed a standardized terminology and description for texture-modified foods and thickened fluids to allow dysphagia patients to receive the correct consistency of food ... Show more

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Instrumental texture assessment of IDDSI texture levels for dysphagia management. Part 1: Thickened fluids

Hadde, EK; Prakash, S; (...); Chen, JS Jun 2022 (Early Access) | JOURNAL OF TEXTURE STUDIES

➡ Enriched Cited References

Thickened fluids are commonly used in the medical management of individuals who suffer from swallowing difficulty (known as dysphagia). International Dysphagia Diet Standardization Initiative (IDDSI) developed a standardized terminology and description for texture-modified foods and thickened fluids to allow dysphagia patients to receive the correct consistency of food/drink. Syringe flow test ... Show more

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IDDSI Innovation 3D printing

3D Printing of Shiitake Mushroom Incorporated with Gums as Dysphagia Diet

Liu, ZB; Bhandari, B; (...); Li, HB Sep 2021 | FOODS 10 (9)

➡ Enriched Cited References

With the speeding tendency of aging society, the population experienced dysphagia is increasing quickly. Desirable dysphagic diets should be safe, visually appealing and nutritious. 3D printing allows for creation of personalized nutritious foods with regular-like appearance. Shiitake mushroom, rich in protein and bioactive compounds, is suitable for elderly, but its hard texture was not friendly to the elderly with dysphagia. This study investigated the feasibility of production of dysphagic product using shiitake mushroom by 3D printing with various gums addition, including arabic gum (AG), xanthan gum (XG) and k-carrageenan gum (KG) at concentrations of 0.3%, 0.6% and 0.9% (w/w). Data suggested that XG and KG incorporation significantly increased inks' mechanical strength by decreasing water mobility and promoting the formation of hydrogen bond, enabling 3D printed objects with great self-supporting capacity. The XG containing and KG-0.3% samples were categorized into level 5-minced and moist dysphagia diet within international dysphagia diet standardization initiative (IDDSI) framework. AG addition decreased mechanical strength and viscosity, hardness and self-supporting capacity of 3D printed constructions. AG-0.3% and AG-0.6% samples could not be classified as dysphagia diets based on IDDSI tests. This study provides useful information for dysphagia diet development with appealing appearance by 3D printing.

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Related records

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Citations

References





IDDSI innovation Transitional foods



A Comparison of Behavior of Transitional-State Foods Under Varying Oral Conditions

<u>Barewal, R; Shune, S; (...); Kosty, D</u> Apr 2021 | May 2020 (Early Access) | <u>DYSPHAGIA</u> 36 (2) , pp.316-324



- Optimise eating pleasure and nutrition
- N= 30, 50-80 yr olds
- Oral hold 5s, 12s
- With/without tongue pressure
- Individual variation
- Clinical testing needed







IDDSI and poverty or resource constrained communities

The impact of modification techniques on the rheological properties of dysphagia foods and liquids <u>de Villiers, M; Hanson, B; (...); Pillay, M</u> Feb 2020 | Sep 2019 (Early Access) | <u>JOURNAL OF TEXTURE STUDIES</u> 51 (1), pp.154-168

Specialised nutritious foods

- Used in poor or resource constrained communities
- IDDSI Levels 2 and 4
- Mix with water and milk
- Check heated vs. room temp
- Use of aeration (whisk) and sieve to reduce lumps
- Allows consistent, safe consistency





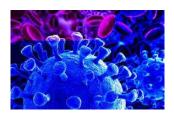
IDDSI and chewing training

The functional chewing training for chewing dysfunction in children with repaired EA-TEF Arslan, SS; Demir, N; (); Soyer, T Sth International-Network-on-Esophageal-Atresia Meeting Apr 2020 JOURNAL OF PEDIATRIC SURGERY 55 (4) , pp.635-638 Background/Purpose: Chewing disorders (CD) may cause restrictions in solid food intake and can be seen in 37% of children with esophageal atresia-tracheoesophageal fistula (EA-TEF). The Functional Chewing Training (FCT) is a holistic approach to improve chewing function (CF) in children. The study aimed to evaluate the effects of FCT on CF in children with EA-TEF.	3 Citations 19 References	
Methods: Twenty children with CD were included. Patients received 12 weeks FCT including impairment-based and adaptive components. Chewing performance level was scored with Karaduman Chewing Performance Scale (KCPS), and tolerated food texture was determined by the International Dysphagia Diet Standardization Initiative (IDDSI). The baseline and final levels of KCPS and IDDSI were compared to evaluate the effects of FCT on CF. Results: Forty-five percent of cases were isolated-EA, and 55% were EA-distal TEF with a median age of 31 (min = 25, max = 84) months, of which 65% (n = 13) were male. Baseline evaluation showed that 12 cases were in level-1, 6 cases in level-3 and 2 cases in level-4 according to KCPS. Eight children with CD (40%) had IDDSI level-3 and 12 (60%) had level-7. There was a significant improvement in KCPS scores and IDDSI scores after 12 weeks of training (p < 0.01, p = 0.005, respectively). KCPS scores showed level-0 in 15 cases, and level-1 in 5 cases. All children had IDSSI level-7.		
 Oesophageal atresia 12 weeks chewing training All children on IDDSI Level 7 		

International Dysphagia Diel Standardisation Initiative



IDDSI and COVID ...





Dysphagia Characteristics of Patients Post SARS-CoV-2 During Inpatient Rehabilitation

<u>Webler, K; Carpenter, J; (...); Cherney, LR</u> Feb 2022 | <u>ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION</u> 103 (2) , pp.336-341

Objective: To investigate dysphagia in patients recovering from SARS-CoV-2 admitted to acute inpatient rehabilitation by summarizing clinical swallow evaluation and videofluoroscopic swallow study findings.

Design: Retrospective cohort study.

- Admission IDDSI level + IDDSI level after VFSS
- 20% of patients evaluated by VFSS
- 51% upgraded to IDDSI Lv7 and Lv0 after VFSS
- 5% downgraded or remained on admission IDDSI level
- Heterogeneity; prolonged intubation





IDDSI adoption

22. Adopt	ing the IDDSI Framework.)	
diamate in	Bulletin: Royal College of Speech & Language Therapists, Oct2017; (786): 5-5. 1/8p. (Article - brief item, pictorial) ISSN: 1466-173X		
	Subjects: Deglutition Disorders Diet Therapy; Program Implementation; Food, Formulated Standards		
Periodical	Get it at UQ Library Get it at UQ Library		
23. Facilit	ators and Barriers to Implementing the International Dysphagia Diet Standardisation Initiative in Care Facilities in Upstate New York.		
	(includes abstract) Harvey, Caileen; Flemming, Rachel; Davis, Julia; Reynolds, Victoria Perspectives of the ASHA Special Interest Groups, Feb2022; 7(1): 156-164. 9p. (Article - research, tables/chart 2381-473X	ts) ISSN:	
Academic	Subjects: Deglutition Disorders Diet Therapy; Health Facilities New York; Diet; Health Personnel		
Journal	Cited References: (19)		
	DF Full Text		
	10. Developing an IDDSI-Compliant Dysphagia Diet: Is your facility's food for patients with dysphagia ready for next month's international standardization? Here's how one hospital prepared.		
	(includes abstract) PIERA, LAINA; RIOLES, STEPHANIE ASHA Leader, Apr2019; 24(4): 38-40. 3p. (Article - tables/charts) ISSN: 1085-9586		
	Surjeta: Deglatitor Disorders, dei Cialdadas, roci, i cimitalea, cardenne Adresence		
	Periodical 🔁 PDF Full Text		
	11. Are you IDDSI ready?		
	(includes abstract) Boaden, Elizabeth; Lightbody, Elizabeth; Watkins, Caroline British Journal of Neuroscience Nursing, Feb/Mar2019; 15(1): 13-18. 6p. (Article - tables/charts) ISSN: 1747-0307 Subjects: Deglutition Disorders Diet Therapy; Aspiration Prevention and Control; Diet Standards; Conceptual Framework		
	Academic Journal Get It at UQ Library		







An AU IDDSI implementation story

Dietetics & Foodservices

- Currently operate with a room-service on-demand model across all
 South Brisbane and Springfield hospitals
- No set meal periods with a static one day menu including rotating *Specials,* all day breakfast and build-your-own options
- Use CBORD, an electronic menu management system with integration to upstream systems that control patient ID, location and diet code information





Auditing menu items

177 items audited over 5 days

Audit Team:

- X4 dietetic students
- X2 Senior Speech Pathologists (adult and paediatric)
- Executive Chef
- Senior Foodservice Dietitian





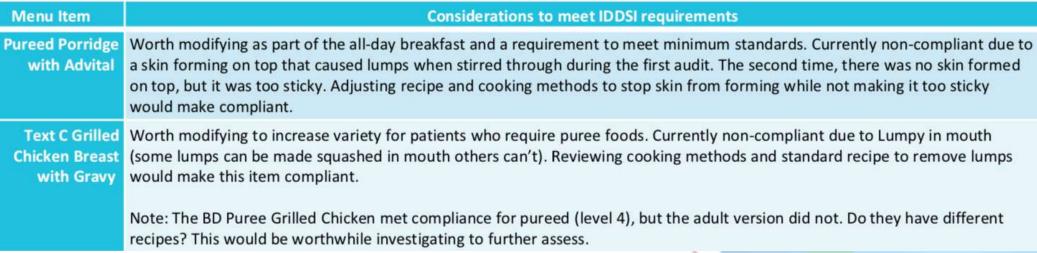


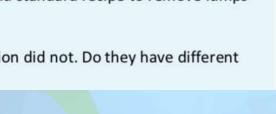
Audit

	Austral	ia Standard	S				IDDSI		
Regular	Soft	Minced and Moist	Puree	Mater Menu Categories	Regular	Soft and Bite-Sized	Minced and Moist	Pureed	Liquidised
6	1	1	0	Breakfast cereal	8	0	0	0	0
4	4	0	0	Breakfast bread	5	3	0	0	0
2	3	0	3	Breakfast fruit	5	0	1	2	0
4	4	5	2	Breakfast hot	6	4	5	0	0
3	2	0	10	Dessert	7	3	0	3	2
9	7	6	9	Hot mains	13	6	5	6	1
4	0	1	2	Soup	6	0	0	0	1
1	2	0	2	Sauce	4	0	0	1	0
12	2	0	5	Sides	8	6	2	3	0
4	0	2	3	Snacks	4	1	0	4	0
2	2	0	0	Special - dessert	3	1	0	0	0
4	0	0	0	Special - main	3	1	0	0	0
0	0	4	0	Special - soup	2	2	0	0	0



Example: Considerations











Promoting uptake

- Prefence for visual aids to assist training and eduction 4-6 weeks prior to IDDSI (cheat sheet, labels, posters)
- Use existing training methods: Huddles, online systems, IDDSI resources
- Hands-on workshops led by speech pathologists
- Food service assistants, Chefs and Room service assistants adaptable and used to change [©]





Chef supervisor implementation plan

Timing	Action	Resources
4 months prior	Food service coordinators provide food supervisors access to IDDSI website/resources. ALL staff to sign off on completion of webinars	IDDSI webinars re: IDDSI levels and testing methods
2 months prior	Practical demonstrations with Speech Pathologists, texture modification requirements/restrictions, testing methods, clinical implications of incorrect textures	IDDSI Complete Framework Barium swallow videos

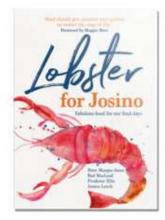


Implementation plan contd.



Timing	Action	Resources
2 months prior	Executive Chef trains Chef supervisors	Webinars; IDDSI complete Framework
4-6 weeks prior	Refresher on IDDSI knowledge and resources	Webinars and Website
Evaluation	100% staff signatures prior to implementation OR 100% completed online education module	





Dazzling doses of flavour combined with appetising injections of creativity, delivered in just the right way to enjoy for days or decades!

Lobster for Josino: Fabulous food for our final days brings the joy of food to many who might otherwise miss out through practical but expert advice and clever, restaurant-quality recipes.

Inspired by a much-loved Sydney chef's final meal request and belief that the sharing of beautiful food is an essential part of life - however much longer that might be - Lobster for Josino introduces dozens of amazing new taste ideas for everyone to enjoy.

Chef and author Peter Morgan-Jones (Don't give me eggs that bounce, It's all about the food and not the fork!) joined with wellknown palliative care specialist Professor Rod MacLeod (The Palliative Care Hand Book) to create this world first cookbook that provides advice and tips about food at the end of life as well as more than 100 innovative recipes.

Further expertise was added by speech pathologist Prudence Ellis also an author of the two previous cookbooks - and dietitian Jessica Lynch which ensures Lobster for Josino is full of beautiful food and drink, that is also safe and appropriate for various stages including those who enjoy a normal diet, those on modified diets and even those who are at a stage of eating very little or are 'nil by mouth'.



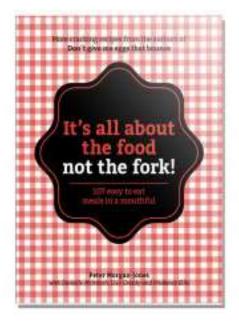




Imagine... you're not comfortable with cutlery, can't face a large meal, have reduced appetite, trouble with chewing or swallowing, are always on the move or have other things on your mind—an easy to eat, handheld snack that is high in energy, nutrition and taste will restore dignity and enjoyment to your dining experience. While everyone who loves a snack will enjoy It's all about the food not the fork, it is a gift of love especially prepared for older people and people with dementia, swallowing difficulties or other disability, as well as carers.











Parki's Kookatelier



First cooking guide for patients with chewing and swallowing problems and odour and taste loss launched 9 September 2015 in the presence of the royal couple of Belgium







Chefs in Future Integrated Healthcare – Current State and Innovation Needs: A First Overview of the NECTAR Project (aN Eu Curriculum for Chef gasTro-Engineering in Primary Food Care)

MARJOLEIN WINTERS VALENTINA WAGNER ROBERTA PATALANO SONJA LINDNER SERENA ALVINO REGINA ROLLER-WIRNSBERGER HEIDEMARIE MÜLLER-RIEDLHUBER SANDRA PAIS MATILDE BORRIELLO

JOHN FARREL GEERTRUI VLAEMYNCK (D) MARTIJN VAN GEMST BART GEURDEN (D) LOBKE VAN DEN WIJNGAERT EDWIG GOOSSENS MADDALENA ILLARIO (D) CAROLIN HERZOG (D)

*Author affiliations can be found in the back matter of this article



ABSTRACT

People in need of care, chronic or acute, often present problematic food intake and special nutritional needs. Integrated, person-centred and pro-active food and nutritional care delivery has been proven effective for people in health care. However, skills mismatches have been reported in different professions involved, which also applies to the role of chefs in healthcare. The EU funded project NECTAR aims at



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]U[ubiquity press

CORRESPONDING AUTHOR: Regina Roller-Wirnsberger, MD, MME

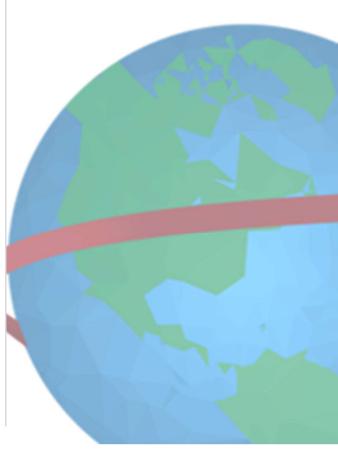
Medical University of Graz, Department of Internal Medicine, Research Group for Old Age Medicine and Lifelong Health, Auenbruggerplatz 15, 8036 Graz, AT

aging-ukim@medunigraz.at

KEYWORDS:

integrated health care systems; chef; vocational education and training (VET); interprofessional; food; putrition; malputrition









Thank you!

Questions later?

email: Julie.cichero@iddsi.org

