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
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Speaker Disclosures

• IDDSI, Co-Chair
• IDDSI Board member
• Consultant to Industry
• Provides paid professional education
Why are we here?

Safety through...
Common terminology for
All ages
All care settings
All cultures
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."
Choking is the second highest cause of preventable death in aged care (AU)

True extent of problem not known

"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.

"All we've done is look at the tip of the iceberg," he said.
Choking deaths increase as we age

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

- 45-69% community or home
- 3-27% hospital
- 2-24.5% aged care facility

References:
- Kramarow (2014), Injury Prevention, 20:200-203
As clinicians, we’ve been taught to focus on liquids.
Now, we are also looking at solids
Standardisation of terminology, description and testing methods

NOT a ‘prescription’
IDDSI includes specific measurements that minimise the need for personal subjective judgement.

How thick is “thick”? How soft is “soft”? How small is “small”?

Simple, quick, portable, reliable
Measuring the impact of IDDSI

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?
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

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


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.

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

Subjects: Deglutition Disorders Diet Therapy; Diet Standards; Infant Formula; Cereals
We are seeing international adoption.
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

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

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...

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

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...

Full Text at Publisher
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.
IDDSI innovation
Transitional foods

A Comparison of Behavior of Transitional-State Foods Under Varying Oral Conditions
Barewal, R; Shune, S; (...); Kosty, D
Apr 2021 | May 2020 (Early Access) | DYSPHAGIA 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
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

The impact of modification techniques on the rheological properties of dysphagia foods and liquids

de Villiers, M; Hanson, B; (...); Pillay, M
Feb 2020 | Sep 2019 (Early Access) | JOURNAL OF TEXTURE STUDIES 51 (1), pp.154-168
IDDSI and chewing training

The functional chewing training for chewing dysfunction in children with repaired EA-TEF

Arslan, SS; Demir, N; (...); Soyer, T
5th 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.

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 IDDSI level-7.

- Oesophageal atresia
- 12 weeks chewing training
- All children on IDDSI Level 7
• 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

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

Webler, K; Carpenter, J; (...); Cherney, LR
Feb 2022 | ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION 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.
22. Adopting the IDDSI Framework.


Subjects: Deglutition Disorders Diet Therapy; Program Implementation; Food, Formulated Standards

Get it at UQ Library

23. Facilitators and Barriers to Implementing the International Dysphagia Diet Standardisation Initiative in Care Facilities in Upstate New York.

(includes abstract) Harvey, Callie; Flemming, Rachel; Davis, Julia; Reynolds, Victoria Perspectives of the ASHA Special Interest Groups, Feb 2022; 7(1): 156-164. 9p. (Article - research, tables/charts) ISSN: 2381-473X

Subjects: Deglutition Disorders Diet Therapy; Health Facilities New York; Diet; Health Personnel

Cited References: (19)

PDF 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, LAURA; RIOLES, STEPHANIE ASHA Leader, April 2019; 24(4): 36-40. 3p. (Article - tables/charts) ISSN: 1085-9586

Subjects: Deglutition Disorders; Diet Standards; Food; Formulated; Guideline Adherence

PDF Full Text

11. Are you IDDSI ready?


Subjects: Deglutition Disorders Diet Therapy; Aspiration Prevention and Control; Diet Standards; Conceptual Framework

Get it at UQ Library
An AU IDDSI implementation story

Dietetics & Foodservices at Mater Health

- 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

<table>
<thead>
<tr>
<th>Australia Standards</th>
<th>Mater Menu Categories</th>
<th>IDDSI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regular</strong></td>
<td><strong>Soft</strong></td>
<td><strong>Minced and Moist</strong></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
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<td>0</td>
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<td>4</td>
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</tbody>
</table>
**Example: Considerations**

<table>
<thead>
<tr>
<th>Menu Item</th>
<th>Considerations to meet IDDSI requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pureed Porridge with Advital</td>
<td>Worth modifying as part of the all-day breakfast and a requirement to meet minimum standards. Currently non-compliant due to a skin forming on top that caused lumps when stirred through during the first audit. The second time, there was no skin formed on top, but it was too sticky. Adjusting recipe and cooking methods to stop skin from forming while not making it too sticky would make compliant.</td>
</tr>
<tr>
<td>Text C Grilled Chicken Breast with Gravy</td>
<td>Worth modifying to increase variety for patients who require puree foods. Currently non-compliant due to Lumpy in mouth (some lumps can be made squashed in mouth others can’t). Reviewing cooking methods and standard recipe to remove lumps would make this item compliant.</td>
</tr>
</tbody>
</table>

Note: The BD Puree Grilled Chicken met compliance for pureed (level 4), but the adult version did not. Do they have different recipes? This would be worthwhile investigating to further assess.
Promoting uptake

- Preference for visual aids to assist training and education 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

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

<table>
<thead>
<tr>
<th>Timing</th>
<th>Action</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 months prior</td>
<td>Executive Chef trains Chef supervisors</td>
<td>Webinars; IDDSI complete Framework</td>
</tr>
<tr>
<td>4-6 weeks prior</td>
<td>Refresher on IDDSI knowledge and resources</td>
<td>Webinars and Website</td>
</tr>
<tr>
<td>Evaluation</td>
<td>100% staff signatures prior to implementation OR 100% completed online education module</td>
<td></td>
</tr>
</tbody>
</table>
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 well-known 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)

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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...
Thank you!

Questions later?

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