National Dysphagia Diet

• Calls for standardization of data collection and research techniques to build the database to establish ranges in the future:
  – Measure at 50 sec⁻¹
  – Temperature is 25°C
  – Proposed ranges:
    • Thin Under 50 cP
    • Nectar-like 51-350 cP
    • Honey-like 351-1750 cP
    • Spoon Thick Above 1750 cP

“...these categories do not necessarily represent the ranges expected for true dietary nectars or honey, nor do they address the serving temperature of actual food. Instead, the borders and ranges suggested here are intended to be used as a basis for discussion...Further study and peer-reviewed, scientific data will be needed to truly quantify the management parameters surrounding the complex diagnosis of dysphagia.”

“...these categories do not necessarily represent the ranges expected for true dietary nectars or honey, nor do they address the serving temperature of actual food. Instead, the borders and ranges suggested here are intended to be used as a basis for discussion...Further study and peer-reviewed, scientific data will be needed to truly quantify the management parameters surrounding the complex diagnosis of dysphagia.”

“The material in this appendix...should be regarded as the beginning of a discussion and research agenda on the topic of viscosity and shear rates...The suggested ranges do not reflect those currently used for any organization or company, but are meant to be a catalyst for more research in this area...It is fully expected that the suggested ranges here will be modified as soon as more research is available.”
Why do we need a standardised system?

Safety
- Multiple labels and definitions cause confusion
- Within and between institutions
  - Individuals with swallowing difficulties
  - Family/Care providers
  - Health care professionals
  - Food services

Clinical efficiency
- Avoids re-assessment to determine safe liquid and diet levels

Commercial implications
- 'Ready to use/off-the-shelf' items that are consistent from manufacturer/supplier to manufacturer/supplier and similar to those produced in hospitals/care facilities/at home

Development of clinical evidence and conducting research
- Lack of consistency
• There IS evidence that thickening helps those who aspirate thin liquids
• There is ALSO evidence that there is such a thing as “too thick”, where residue begins to accumulate
• There is no specific evidence to point to particular rheological values that define the boundaries of effective thickening (either just thick enough or too thick)
• There IS evidence solid food and thicker consistencies require greater effort in oral processing and swallowing
• There is very little literature specifically about texture modified food used for the management of dysphagia

IDDSI systematic Review

Putting it all together...

Developing a culturally-sensitive, age-span relevant framework for classifying texture modified foods and thickened drinks

IDDSI Framework (Rev August 2016)
The Measurement Dilemma

• Measuring viscosity is TOO complicated to use in kitchens as the basis for classifying thickness
• Need a simpler, but valid and reliable method for measuring thickness at the point-of-use
Example videos of the IDDSI flow test can be found on YouTube and accessed through the resources page on the IDDSI website: www.iddsi.org

IDDSI 10 ml syringe specifications

Before use, check the nozzle is clear and free from any plastic residue or manufacturing defects that may occasionally occur.
Particle Size:
• For hard and soft solid foods, a maximum food sample size of ~1.5 x 1.5 cm is recommended, which is the approximate size of the adult human thumb nail (Murdan, 2011).

• For minced and moist foods, a maximum particle size of 4 mm for adults and children 5 years and older is recommended.
• For under 5 years, 2 mm max particle size is recommended.
IDDSI Fork Test:

- The slots/gaps between the tines/prongs of a standard metal fork typically measure 4 mm.
- This provides a useful compliance measure for particle size of foods at Level 5 - Minced & Moist.

IDDSI Fork Pressure Test:

- A fork can be applied to the food sample to observe its behavior when pressure is applied.
- Pressure applied to the food sample has been quantified by assessment of the pressure needed to make the thumb nail blanch noticeably to white.
What are Transitional Foods?

- Foods that start as one texture and change into another with moisture or temperature
- Minimal chewing required
- Tongue pressure may be sufficient to break food down after alteration in moisture or temperature

Monitor-Aware-Prepare-Adopt (Global Perspective) Model for Implementation

**Monitor**
- Learn the Standards
- Learn the Standards
- Learn the Standards
- Learn the Standards
- Learn the Standards

**Aware**
- Build awareness across facilities/factors to all impacted clinicians, professional associations, and their boards, industry, administration, government, supply chain and support staff
- Communicate who, what, where, when, why & how impacted

**Prepare**
- Assess processes and protocols that may need to change – Menus? Colors? Numbers?
- Talk with your suppliers about their ability and timing to convert
- Prepare clinicians, stakeholders and all staff

**Adopt**
- Introduce new IDDSI system to commercially ready to use, pre-packaged goods and at facility level and in food service chain
- Transition and integration

Learn the Standards – www.iddsi.org Model for Implementation

IDDSI Framework consists of the information found in 4 key documents:
Prepare

Learn the Standards – www.iddsi.org

IDDSI: International Dysphagia Diet Standardisation Initiative

Learn more about the IDDSI Framework and how you can help
people with dysphagia in your practice or home.

IDDSI Apps

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The National Dysphagia Diet

Food
- Level 1: Dysphagia Pureed
- Level 2: Dysphagia Mechanically Altered
- Level 3: Dysphagia Advanced

Drinks
- Thin
- Nectar-like
- Honey-like
- Spoon-thick
IDDSI Framework & NDD: Differences

Terms Used

Terms are meant to be more descriptive and intuitive:

- Mechanically Altered Vs. Minced & Moist
- Dysphagia Advanced Vs. Soft & Bite-Sized
- Thickness: Slightly -> Mildly -> Moderately -> Extremely

IDDSI Framework & NDD: Differences

Terms Used for Foods

NDD
- Level 1: Dysphagia Pureed
- Level 2: Dysphagia Mechanically Altered
- Level 3: Dysphagia Advanced

IDDSI
- Level 3 – Liquidized
- Level 4 – Pureed
- Level 5 – Minced & Moist
- Level 6 – Soft & Bite-Sized
- Level 7 – Regular
- Transitional Foods
IDDSI Framework & NDD: Differences

Terms Used for Liquids

**NDD**
- Thin
- Nectar-like
- Honey-like
- Spoon-thick

**IDDSI**
- Level 0 – Thin
- Level 1 – Slightly Thick
- Level 2 – Mildly Thick
- Level 3 – Moderately Thick
- Level 4 – Extremely Thick

Colors & Numbers

- Tray liners
- Hang Tags
- Cups and Plates

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IDDSI Framework & NDD: Differences

How Thickened Liquids are Defined

NDD
• Did not find support for any ranges – literature confusing
• Called for more data collection
• Offered “suggested viscosity ranges” at the end of the Appendix
• Suggested viscometry

IDDSI
• Defined specific ranges and test results
• Decided against viscometry
• Developed simple flow test
• Can be tested (almost) anywhere

NDD Borders Exist

• Suggested ranges differ by a single centipoise
• Effectively meaningless:
  50 vs. 51
  350 vs. 351
  1750 vs. 1751

IDDSI
• Flow Test results exactly at the borders are neither level
• “Between”
• Level 4 Extremely Thick
• Not just Flow Test
• If no flow, 2 more tests:
  • Spoon Tilt
  • Fork Drip
IDDSI Framework & NDD: Differences

**Maximum Food Size**

- **Mince/Mech Alt**
  - NDD: No Larger than 0.25"
  - IDDSI: < 4 mm

- **Soft & Bite/Advanced**
  - NDD: Bite-sized pieces
  - IDDSI: 15 mm = 1.5 cm
  - A real “rule of thumb”

---

**IDDSI Framework & NDD: Differences**

**Dysphagia Outcome and Severity Score**

NDD advocated to use the Dysphagia Outcome and Severity Score (DOSS)

Felt it was best correlated to the appropriate diet

IDDSI has nothing similar**
(There may be a scale coming soon)

---

**IDDSI Framework & NDD: Differences**

**Point of Service is the Point**

- IDDSI is very focused on the food and drinks as served
- Test Methods were developed to make that easy
- Will require a difference in thought and (?) more testing
  - Cold
  - Hot
  - After holding for awhile
IDDSI Framework & NDD: Differences

Lists of appropriate foods

NDD
- Extensive Lists of foods
  - Recommend
  - Avoid
  - By Food Group

IDDSI
- Minimal Lists of foods
  - Detailed Descriptions of behavior
  - Detailed Test Methods

Prepare

Example Lists / tables

Prepare

Example Lists / tables
Example Lists / tables

IDDSI in progress...

Consultations and international communications to date

<table>
<thead>
<tr>
<th>Country</th>
<th>Activity details</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERMANY</td>
<td>Kempen, First IDDSI Pilot site, Progressive roll out Neuro Ward hospital - Arctemed healthcare network (10 hospitals)</td>
</tr>
<tr>
<td>IRELAND</td>
<td>Meeting with IALST and Irish Nutrition &amp; Dietetic Ass (INDI) Taking to Boards for endorsement</td>
</tr>
<tr>
<td>CHINA</td>
<td>Implementation task force formed</td>
</tr>
<tr>
<td>ISRAEL</td>
<td>Implementation task force commenced</td>
</tr>
<tr>
<td>UK</td>
<td>Stakeholder meeting: BDA + RCSLP to lead stakeholder taskforce to develop plan for UK implementation</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>Meetings with SPA &amp; DAA - awaiting board decisions</td>
</tr>
<tr>
<td>USA</td>
<td>Ongoing liaison with ASHA; American Academy of Nutrition + Dietetics will include IDDSI on online nutrition care manual</td>
</tr>
<tr>
<td>CANADA</td>
<td>MAPA process commenced SAC CADT CINN Pilot in New Brunswick</td>
</tr>
</tbody>
</table>
Incorporation of IDDSI into University courses has commenced in...

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