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Presentation Objectives

During this session participants will:

- Develop an understanding of the IDDSI framework
- Learn about various dysphagia diets and their relationship to resident safety
- Understand the various testing methods to assure compliance with the IDDSI framework




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Why IDDSI?




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...Alexander, 59 gagging on toast at breakfast, died on chicken at lunch (2014, AU)...  
 Millie 9 months, choked on Shepherd's Pie at Nursery (Great Manchester UK)... Male 44, choked  
 on food Nottingham Mental Health Unit (2015, UK)... Male, 45 choked on hazelnut spread and  
 died... Mona Belle, 95 choked on carrots and peas (AU)... Woman 73 choked on Indian-sandeh  
 glutinous, lump-sized food (Singapore)... Eldon, 88 with poor dentition choked on partially  
 chewed food (Canada)... Brian, 84 on 'soft diet' choked on toast and died (AU)... Katie, 56 choked  
 on meat at a group home and died... Pamela, 78 with Alzheimer's choked on toast and  
 died (2016)... Male, 76 in aged care, choked on chocolate cake and died... Marjorie, 69 choked on  
 sandwich and died.



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*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

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*Why do we need a standardised system?*

**Clinical efficiency**

- Avoids re-assessment to determine safe liquid and diet levels
- Reduces need to confirm and clarify clinical information.

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*Why do we need a standardised system?*

**Commercial implications**

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

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**Dysphagia**

- Abnormal swallowing due to disturbance in the transfer of food or liquid from the mouth to the stomach
- Disturbances may involve the oral (mouth), pharyngeal (throat) or esophageal (esophagus) phases of the swallowing sequence
- Dysphagia is a symptom of underlying disease, most often neurological or mechanical/obstructive

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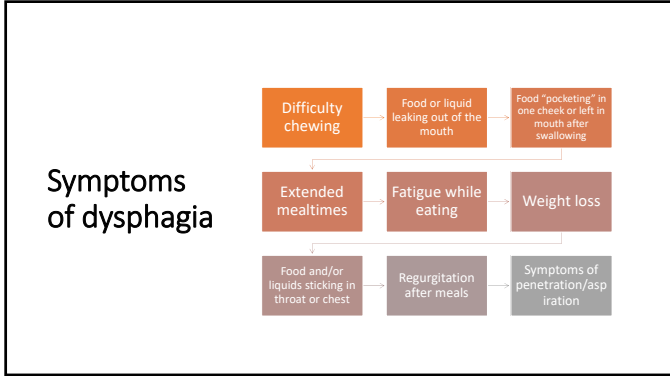
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**Symptoms of penetration/aspiration**

- Wet, gurgly vocal quality prior to swallowing &/or after swallowing
- Choking/airway obstruction
- coughing
- subtle throat clearing
- Laryngeal penetration: material enters voice box, stays above vocal cords and either clears or remains in the voice box
- Aspiration: material falls below the vocal cords into the trachea/windpipe

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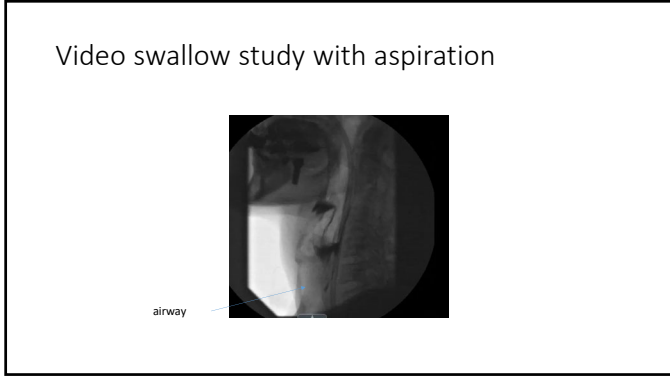
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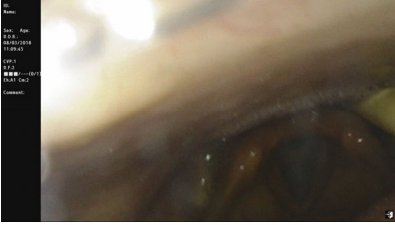
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Fiberoptic endoscopic swallow study




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Implementation of IDDSI at the University of Michigan  
**Michigan Medicine**




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Michigan Medicine

- Ann Arbor, Michigan
- 1000 Licensed beds (medical and surgical)
- University of Michigan teaching hospital
- 28,000 Employees
- 3,000+ Faculty
- 5,000+ Nurses
- 1,200 Residents in Training
- 26 Accredited Residency Programs




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**IDDSI Task Force Creation**

- Primary Members
  - Patient Food and Nutrition Services
    - Director, Associate Director, Managers
  - Speech-Language Pathology
    - Adult and pediatric SLP's
  - Pharmacy
  - Several other participants received meeting minutes




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**Task Force**

- Develop timeline
  - Monthly meetings
  - Consulted with MiChart (our e-chart) to determine dates for scheduled "downtime" and timeline for ticket submissions (early)
  - Set goal date for implementation for November 2018




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**Menu Development**

- Determine names for IDDSI diet levels on our new menus
- Review of prior Texture Modified menu
  - NDD dysphagia levels 1-3
- Existing menu items were IDDSI tested by Patient Food and Nutrition Compliance Team
  - All items assigned appropriate IDDSI level




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**IDDSI Dysphagia Diet Names**



Patient Food and Nutrition Services

IDDSI Dysphagia Diet Names (draft)  
July 2, 2019

Michcart (Epic)	Interface Name & CBORD Short Name (used in RS, card file, tray tickets)	CBORD Description (used in item maintenance)	Misc
Dysphagia Level 7/Black (Easy to Chew)	Dys7 EasyChew	Dys7 Black EasyChew	Previous Dys3 compliance with modifications. Implement September 2019
Dysphagia Level 6/Blue (Soft Bite Size)	Dys6 BiteSz	Dys6 Blue BiteSz	
Dysphagia Level 5/Orange (Minced Moist)	Dys5 Mince	Dys5 Orange Minced	
Dysphagia Level 4/Green (Pureed)	Dys4 Puree	Dys4 Green Pureed	
Moderately Thick Consistency	ModThick	Mod Thick	
Mildly Thick Consistency	MildThick	Mild Thick	
Slightly Thick Consistency	SlightThick	Slight Thick	
Thin Consistency	Thin	Thin - Thin	
No Liquid	No Liq	Thick - No Liq	




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**Menu Development**

- RDN's and SLP's met to discuss gaps in menus
- Reviewed updated Academy of Nutrition and Dietetics handouts
- SLP's advocated for separate menus for each IDDSI level (4, 5, and 6)
  - Improved clarity for staff, patients, and families




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
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Academy of Nutrition and Dietetics information



Proposed By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

**IDDSI Mixed and Moist Food, Level 5 (Orange) Nutrition Therapy**

The purpose of this plan is to provide foods that are safe and palatable, and to provide the nutrients that are needed to maintain the patient's weight and to provide the patient with a diet that is safe and palatable. Foods should be as soft as possible and easy to swallow.

A registered dietitian/nutritionist can individualize this diet to provide some favorite food items in a modified form.

**Do:**

- Moist all food you eat the previous day when it is no longer for 4-6 months or less.
- Foods should be ground, soft, tender, and moist to make foods easier to chew and swallow. Mixed pieces of food should be smaller than average 2 1/2 inch.
- Add your favorite cereals to other you have to test the consistency of the foods you eat to confirm they are safe for you to eat and swallow. There are commercial cereals to test the texture of your foods using a ball or soft spoon.
- Avoid excessive thin liquids. Thin liquids include that are often served with liquids such as milk, with fortified cereal or soups that contain milk solids or cream. These liquids should be avoided and substituted with thick liquids.
- To help foods moist, add small amounts of gravy, sauce, vegetable juice or cooking water. Soft puree, milk, or half and half to soups. When serving foods are moist or tender.
- Large chunks of food or hard foods that need to be altered thoroughly should be avoided.
- Avoid very hard, sticky, or crunchy foods. See Foods Not Recommended for list examples.
- Prepare quantities of favorite food items and house them in portion sizes for one meal.
- Patient foods carefully so that a single color does not last on them.

**Do not:**

Foods that are based on the International Dysphagia Diet Standardization Initiative (IDDSI) Framework.

Food: \_\_\_\_\_  
 Fluid: \_\_\_\_\_  
 Protein: \_\_\_\_\_

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Resources Utilized

- IDDSI site - <https://iddsi.org/>
- Nutrition Care Manual - [www.eatright.org](http://www.eatright.org)
- Patient Food and Nutrition Services – Food Service Systems Enhancement Committee (FSSEC)



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Menu Development – Particle Size

- Michigan Medicine is huge institution
- Adult and Children's Hospital share some food items from main kitchen
- Some adult oncology patients housed in Children's Hospital
- Level 5 – utilize 4 mm x 4 mm (adults & peds)
- Level 6– utilize 8 mm x 8 mm (adults & peds)



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**Menu Development**

- Gaps in menu
- Level 5 minced and moist had most gaps
- No commercially prepared foods yet
- Chef menu creation
  - Modified popular items from prior texture modified menu




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**Menu Development - Initial Process**

- Flavor, palatability, nutrition
- Seasonality, availability of product
- Demographics of patients – age, culture, religion
- Avoiding common allergens
- Cost - purchase, labor
- Ability of staff
- Consistency of food served hot and room temperature
- Available equipment
- Storage – available space and use by date
- Estimate of patients served




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**Meat Loaf**





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Chef Tony





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Compliance Testing

- Adult and Pediatric Compliance RDN
- New IDDSI menu items were taste tested and evaluated for particle size, cohesiveness
- Fork test, syringe test, spoon tilt test
- Any manipulation needed?
- Food Service Systems Enhancement Committee




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Prep





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Chef Tony





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Preliminary IDDSI Menu

- Met as group to review prototype menus
- SLP's indicated need for more breakfast items for patient satisfaction
- Level 6 Soft and Bite-Sized included all items from Level 4 and 5 menus for variety
- Level 5 Minced and Moist has the most gaps
  - Looking for more commercially prepared items in the future




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Chicken Noodle	Red Lentil Stew
	




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Red Lentil Stew



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Storage and dating of menu items



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Equipment, Storage, and Dating of Menu Items

- Robo coupe
- Buffalo chopper for less exact dimensions
- Blender, only to be used to puree ingredients, not to puree the whole menu item
- Meat grinder will work well to achieve an even texture
- Frozen in individual portions

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**Education of Production Staff**

- Assign 1-2 staff per menu item to create consistency
- Work with staff for period of time
- Award staff for good work, stopping problems etc.




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**Education of Clinical and Food Service Staff**

- Compliancy RDNs were educated then in-serviced the RDN staff
- Dietetic interns (8) were trained and then educated Food Service Staff
  - Provided food samples of different levels
  - Q&A Session
  - Staff had to guess particle sizes
  - Staff tested for food items improperly labeled per IDDSI standards




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**Education of Speech-Language Pathologists**

- Speech-Language Pathology
  - 45 SLP's across multiple inpatient and outpatient clinics across campus
  - Main Hospital and Children's Hospital
  - Utilized IDDSI resources during in-person Dysphagia Rounds and via email
  - SLP's watched IDDSI webinars




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Education of Hospital Staff

- Roll out November 7, 2018
  - Task Force created email blast with information on transition (when and why)
  - Included IDDSI flyers comparing old to new
  - Attached old vs new meal tickets
  - Reviewed new diet names in MiChart
  - Too big an institution to in-service everyone




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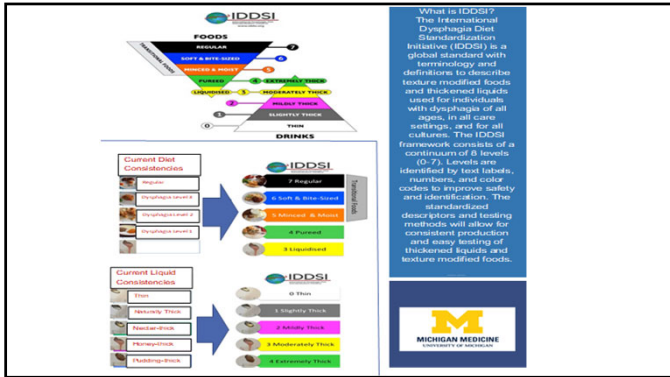
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**What is IDDSI?**  
 The International Dysphagia Diet Standardization Initiative (IDDSI) is a global standard with terminology and definitions to describe texture modified foods and thickened liquids used for individuals with dysphagia of all ages, in all care settings and for all cultures. The IDDSI framework consists of a continuum of 9 levels (0-7). Levels are identified by test labels, numbers, and color codes to improve safety and identification. The standardized descriptors and testing methods will allow for consistent production and easy testing of thickened liquids and texture modified foods.

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Education of Medical Staff

- Emails sent to:
  - RN Educators
    - RN hierarchy, top-down education
  - Mid-level Providers (NP's, PA-C's)
  - Physical Medicine & Rehab unit staff: Rehab MD, PT, OT, rehab RN's
  - Unit Clerk's (where menus are kept)
  - Email blast sent to MD's via the Chief of Clinical Affairs




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**Roll Out**

- SLP's began using both NDD and IDDSI terminology in notes for ~2 weeks before change
- SLP's educated current inpatients on dysphagia diets about upcoming menu change
- SLP's contacted RDN Clinical Managers the night before implementation with FINAL new IDDSI diet recommendations for manual entry
- RDNs changed diet orders for their patients




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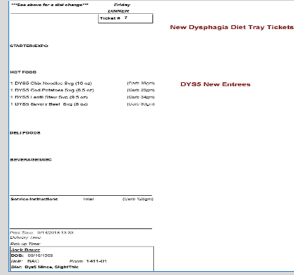

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**Tray Ticket Sample DYS 5 New Food Items**


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**Positive Feedback**

- SLP's are no longer crossing off unsafe items from prior texture modified diet (i.e., mixed consistency chicken noodle soup on Dysphagia Level 2)
- Each diet level has a separate menu
- Improved Patient safety
- IDDSI Handouts for patient education
- International translation




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**Negative Feedback**

- Level 6 is still fairly “mushy” since we are utilizing pediatric particle sizes across sites
- Big leap from level 6 to Regular Consistency
- MD’s began placing orders for “slightly thick” liquids
- Menu still very limited for Level 5 Minced and Moist
- Patient’s transferring from OSH to Michigan Medicine are confused




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**Plan, Do, Check and Act – Continuous Quality Improvement**

- Identified additional needs
  - Menu additions for Level 5 – looking for commercially prepared foods
  - Potential to implement Level 7 Easy to Chew menu




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**IDDSI level 7 Easy to Chew**

- Level 6 at Michigan Medicine still contains very soft, mushy foods
- Other facilities may be able to employ the adult particle size of 1.5cmx1.5cm for level 6 if kitchen is not shared with children’s hospital
- Patients and families are unhappy with level 6 menu restrictions
- Huge leap from pediatric level 6 particle size of 8mm to regular consistency foods
- Currently SLP’s are modifying the regular menu – patient safety risk




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Plan, Do, Check and Act – Continuous Quality Improvement

- Task Force met again in the spring of 2019 to develop Level 7 Easy to Chew menu
  - Agreement amongst the task force needed Level 7
  - Important to avoid using “Regular” when naming the diet
  - Referred to a “Level 7 Easy to Chew”




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IDDSI level 7 Easy to Chew

- Similar to NDD level 3 mechanical soft diet
- Regular – non-modified foods
- Particle size is not restricted
- Avoids hard, fibrous, stringy foods
- Should be able to bite off pieces of soft and tender food




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IDDSI level 7 Easy to Chew

- Good choice for people who may tire easily chewing hard solids, or someone with limited or no dentition
- Not meant for people with increased risk of choking
- People unsafe to eat without supervision should not be advanced to this level
- Bread not included but we allow soft breads to be compliant here
  - any patients with dysphagia will be carefully selected before advancing to this level to ensure safety




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**REGULAR EASY TO CHEW**

Avoid these food textures for adults who choose Level 7 Regular Easy to Chew

Food characteristic to AVOID	Examples of foods to AVOID
Hard or dry food	Nuts, raw vegetables (e.g. carrot, cauliflower, broccoli), dry cakes, bread, dry cereal
Tough or fibrous foods	Steak, pineapple
Chewy	Lollies/candies/sweets, cheese chunks, marshmallows, chewing gum, sticky mashed potato, dried fruits, sticky foods
Crispy	Crackling, crisp bacon, cornflakes
Crunchy food	Raw carrot, raw apple, popcorn
Sharp or spiky	Corn chips/crisps
Pips, seeds	Apple seeds, pumpkin seeds, white of orange
Bone or gristle	Chicken bones, fish bones, other bones, meat with gristle
Sticky or gummy food	Gelatin, gummy candies containing jelly, sticky rice cakes
Stringy food	Beans, rhubarb

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**REGULAR EASY TO CHEW**

Level 7 Regular Easy to Chew For Adults

What is IDDSI? The International Dysphagia Diet Standardization Initiative (IDDSI) is a global standard with terminology and definitions to describe texture modified foods and thickened liquids used for individuals with dysphagia of all ages, in all care settings, and for all cultures. The IDDSI framework consists of a continuum of 8 levels (0-7). Level 7 includes both regular and easy to chew textures. Levels are identified by food labels, numbers, and color codes to improve safety and identification. The international descriptors and testing methods will allow for consistent production and easy labeling of thickened fluids and texture modified foods.

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**Additional Resources**

- Development of the PFANS website link specific to IDDSI
- <http://www.med.umich.edu/pfans/>

PFANS Room Service Menus

- University Hospital and Cardiovascular Center
- Children's and Women's Hospital

- <http://www.med.umich.edu/pfans/iddsi.html>

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Questions?



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