- If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.
- This handout is for reference only. Non-essential images have been removed for your convenience. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.

Technical issues with the Recording?

- Clear browser cache using these instructions
- Switch to another browser
- Use a hardwired Internet connection
- Restart your computer/device

Still having issues?

- Call 866-782-9924 (M-F, 8 AM-8 PM ET)
- Email customerservice@OccupationalTherapy.com

Collaboration of OT and RD in the Treatment of Infants and Toddlers in the Pediatric Clinical Setting

February 27, 2019

OccupationalTherapy.com

Presented By:
Molly Rejent MOT, OTR/L
Kathryn Riner, MS, RD, LD

Introduction

- Molly Rejent MOT, OTR/L

- Kathryn Riner MS, RD, LD
  - Owner and Founder of Healthy Kids Nutrition, LLC

Learning Outcomes

- Identify 3 pediatric diagnoses that benefit from the OT/RD relationship.
- Identify 3 important reasons for the OT and RD to complete caregiver interviews together.
- Identify 3 patient outcomes impacted by the OT and RD relationship.

Mealtime relationships

CONTINUED

Relationship-based feeding

"A holistic approach is key to addressing multiple factors while supporting the feeding relationship. Data obtained through a systematic review of the literature support multiple types of feeding interventions (i.e., oral–motor, parent mediated, positioning, behavioral) because of the complex nature of feeding difficulties."

"Occupational therapy offers a unique perspective on feeding, eating, and swallowing because it considers all factors involving the person, environment, and occupation."

"Most children with complex feeding problems have a combination of underlying issues that are best addressed by an interdisciplinary team."

"Feeding is a primary occupation of children that is necessary for their growth and development."

"Feeding is a social activity and involves a dyadic relationship between the caregiver and the child."

Henton, P.A. (2018). The Issue Is - A call to reexamine quality of life through relationship-based feeding. American Journal of Occupational Therapy, 72, 7203347010. https://doi.org/10.5014.ajot.2018.025650

CONTINUED

Putting Collaboration into Practice

- OT/RD have similar assessment questions and collaborating while interviewing the caregiver together allows us to benefit from the discipline specific knowledge as well.
- OT/RD working together sends the caregiver a consistent message, which allows them to trust the process.
- Improves productivity of RD/OT because they communicate verbally and simultaneously between caregivers and the medical team.
- OT/RD complement each other's scope of practice to determine how and what to feed the patient.

Clinical Abbreviations

- NG tube: nasogastric tube (nose to stomach)
- ND tube: nasoduodenal tube (nose to duodenum)
- PN: Parental Nutrition (IV nutrition, aka “TPN”)
- EN: Enteral Nutrition (feeding that uses the gastrointestinal tract for nutrition delivery, via tube)
- PO: by mouth

Pediatric Feeding Disorder (PFD)

- In 2018, Journal of Pediatric Gastroenterolgy and Nutrition established a Consensus Definition:
  - Pediatric Feeding Disorder (PFD): “impaired oral intake that is not age appropriate, and is associated with medical, nutritional, feeding skill, and/or psychosocial dysfunction”.
  - “To be fully functioning, a child’s feeding skills must be safe, age appropriate, and efficient. Dysfunction in any of these areas constitutes PFD”.
  - Acute < 3 months, but > 2 weeks
  - Chronic > 3 months

Goday, P., Huh S.Y., Silverman, A., Lukens, C.T., Dudrill, P., Cohen, S.S.,… Phalen, J.A. (2018). Pediatric Feeding Disorder: Consensus Definition and Conceptual Framework. *Journal of Pediatric Gastroenterology and Nutrition*. Doi:10.1097/MPG.0000000000002188.

PFD (cont.)

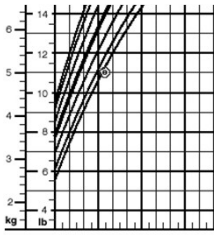
- Medical
  - Prematurity
  - End stage liver disease
  - Congenital Heart Disease
- Nutritional
  - Inadequate intake to meet nutrition and fluid needs
- Feeding Skill
  - Delayed oral motor/oral sensory skill development
- Psychosocial
  - Environment
  - Structure of meals and snacks

Infant – oral eater

- Assessment Interview: what we ask
- Intervention: what and how to feed
- Education: how to transition recommendations from hospital to home

Infant Case Study - Tommy

- 15 week old male
- born full term at 39 2/7 weeks
- Dx: poor weight in infant, malnutrition, and Tetralogy of Fallot.
- DA from cardiology clinic



Infant Case Study - Tommy

- Anthropometrics at birth:
  - 3.2 kg = 38%tile with a z-score of -0.30
  - 50.5 cm = 63rd%tile with a z-score of 0.33
  - weight for length: 21st%tile with a z-score -0.80
- Admission Anthropometrics:
  - 5 kg = 1st%tile with a z-score of -2.42
  - 60 cm = 11th%tile with a z-score of -1.23
  - weight for length: 1st%tile with a z-score of **-2.24 = moderate malnutrition**

Infant Case Study - Tommy

Malnutrition Definitions: Weight for length or BMI

- Mild malnutrition = z-score of -1-1.99
- Moderate malnutrition = z-score of -2-2.99
- Severe malnutrition = z-score -3 or less

Nilesch, M., Corkins, M., Lyman, B., Malone, A., Goday, P., Carney, L.… and the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Board of Directors (2013). Defining Pediatric Malnutrition: A Paradigm Shift Toward Etiology-Based Definitions. *Journal of Parenteral and Enteral Nutrition, 37 (4): 460-481.* doi: 10.1177/0148607113479972.

Infant Case Study - Tommy

- OT and RD conduct interview together to gather pertinent information about feeding:
  - Mother is a inconsistent historian.
  - Mother reports baby takes 2-3 ounce every 3 hours and that feeds take a ‘long time,’ at least 30-45 minutes.
  - Mother says pt “usually” feeds on demand.
  - Mother reports she mixes the formula “as it says on the can”.

Infant Case Study - Tommy

- RD observations:
  - Pt's growth pattern classifies as chronic, moderate, disease related malnutrition.
  - Calorie intake is inadequate.
    - Reported intake of 2-3 ounces (60-90 mL) every three hours provides: 65-98 kcal/kg while estimated needs for catch up growth are 120-130 kcal/kg.

Infant Case Study - Tommy

- Discussed fluid restrictions with team, goal is to keep fluid intake at ~ 140 mL/kg.
- Pt may benefit from a higher calorie concentration formula, due to congenital heart defect leading to increased energy expenditure.
- Recommend 3 ounces (90 mL) every three hours with 24 kcal/oz concentration to provide: 144 mL/kg and 117 kcal/kg.
- Also added 1 mL olive oil QID to provide another 7 kcal/kg for a total intake of 124 kcal/kg.

Infant Case Study - Tommy

- OT observations during infant feeding:
  - Pt demonstrates strong rooting to bottle nipple
  - Pt creates a fair labial seal with appropriate sucking reflex
  - Therapist notes mild fluid loss but this improves with mild chin and cheek support.
  - Suck swallow breathe patterns are functional with mild intermittent tachypnea.
  - Pace of feeding decreased 10-12 minutes into the evaluation.

Infant Case Study - Tommy

Remember P-E-O

Infant Case Study - Tommy

- Collaborative recommendations:
  - OT: Provided moderate pacing and alerting cues, chin and cheek support, stricter feeding timeframes
  - RD: Increased feedings to 24 kcal/oz concentration and olive oil; recipe recommendations are provided verbally and in writing.

Infant Case Study - Tommy

- Outcome
  - Baby demonstrated improved growth during 4 day stay
    - Gained an average of 32 grams/day (age expected is 15-21 grams/day), discharged at 5.13 kg.
  - Baby did NOT need enteral nutrition support.
  - Parent learned strategies to help improve feedings for their baby with a congenital heart defect.

Infant Case Study Conclusion

"A coordinated team approach is needed to address the multidimensional aspects of feeding while working toward the primary goal: enabling meaningful occupations for both the child and the family."

"Interventions that strengthen the social relationship between the child and the caregiver are essential in feeding practice."

Henton, P.A. (2018). The Issue Is - A call to reexamine quality of life through relationship-based feeding. American Journal of Occupational Therapy, 72, 7203347010. https://doi.org/10.5014.ajot.2018.025650

Toddler – Tube Feeder

- Assessment Interview: what we ask
- Intervention: what and how to feed
- Education: how to transition strategies from hospital to home.

Toddler Case Study - Annie

- 2 yo female with Alagille Syndrome/End Stage Liver Disease
- Admitted for Liver Transplant
- Prior to transplant, was on PN, ate little food PO but did drink vanilla flavored peptide based formula.
- Hospitalized for 83 days
- Complicated course resulted in EN intolerance, emesis, and negative association with eating.

Toddler Case Study - Annie

- OT and RD both followed pt, although initiated services at different times and followed separately
- OT began treatment addressing weakness and engagement in activity as pt was not eating orally at that time
- RD managed EN to promote adequate calorie intake.

Toddler Case Study - Annie

- OT began to address feeding when MDs felt she was ready for PO, and became frustrated she was not engaging
- P-E-O
  - remember that she did not eat well prior to transplant
  - the environment was not conducive (i.e. eating in bed)
  - limited motivation for the occupation of eating (i.e. not hungry, emesis)

Toddler Case Study - Annie

- Pt was an elemental formula via ND tube for 24 hours/day.
- Transitioned to a peptide based hydrolyzed protein formula via NG tube with daytime bolus and overnight continuous feedings.
- Stimulate hunger!
- Document improved po intake.

Edwards, S., Davis, A.M., Ernst, L., Sitzmann, B., Bruce, A., Keeler, D.,… Hyman, P. (2015). Interdisciplinary strategies for treating oral aversion in children. *Journal of Parenteral and Enteral Nutrition, 39(8): 899-909*. Doi: 10.1177/0148607115603111.

Hartdorff, C.M., Kneepkens, C.M., Stok-Akerboom, A.M., van Dijk-Lokkart, E.M., Kinermann, A. (2015). Clinical Tube weaning supported by hunger provocation in fully-tube-fed children. *Journal of Pediatric Gastroenterology and Nutrition, 60(4): 538-543*. Doi:10.1097/MPG.0000000000000647.

Make it Kid Friendly!

Toddler Case Study - Annie

- Outcome
  - Pt transitioned home with NG tube in place for overnight feedings-tube out within 2 weeks of d/c
  - Pt demonstrated improved po intake at home with siblings, family meals, and typical environment and structure.

Toddler Case Study - Annie

Why did OT and RD collaboration make such a large impact on this case?

- Persistence to see the big picture
- Help set pt up for success for discharge and beyond hospitalization
- Demonstrate why ancillary services are a valuable member of the medical team
  - facilitating earlier discharge, reducing use of resources such as tube feeding supplies and equipment

Course Summary

- Assessment, intervention, and education for the pediatric patient is multidisciplinary!
- OT and RD utilize similar assessment questions with feeding, allowing both the professionals and caregivers to benefit from specific knowledge base
- Collaboration sends a consistent message to caregivers

Course Summary

- Simultaneous, *verbal* and written communication to medical team leads to improved treatment planning, and ultimately greater success in patient outcomes
- OT and RD compliment each other's scope of practice- ask each other when they plan to go, what they plan to ask and how they plan to navigate the case

Learning Outcomes - in review

3 pediatric diagnoses that benefit from the OT/RD relationship:

- prematurity
- end stage liver disease
- congenital heart disease

Learning Outcomes - in review

3 important reasons for the OT and RD to complete caregiver interviews together.

- increased productivity
- demonstrates that ancillary services are valuable members of the medical team
- complement each discipline's knowledge and scope of practice

Learning Outcomes - in review

3 patient outcomes impacted by the OT and RD relationship.

- increased patient and caregiver satisfaction knowing that the medical team is sending a consistent message
- setting patient and caregivers up for success with recommendations to take from hospital to home, with persistence to see the big picture
- improved po intake and growth

CONTINUED

Food is Fun!!!

CONTINUED

References:

- Edwards, S., Davis, A.M., Ernst, L., Sitzmann, B., Bruce, A., Keeler, D.,… Hyman, P. (2015). Interdisciplinary strategies for treating oral aversion in children. *Journal of Parenteral and Enteral Nutrition, 39(8): 899-909.* Doi: 10.1177/014860711560311.
- Goday, P., Huh S.Y., Silverman, A., Lukens, C.T., Dudrill, P., Cohen, S.S.,… Phalen, J.A. (2018). Pediatric Feeding Disorder: Consensus Definition and Conceptual Framework. *Journal of Pediatric Gastroenterology and Nutrition*. Doi:10.1097/MPG.0000000000002188.
- Hartdorff, C.M., Kneepkens, C.M., Stok-Akerboom, A.M., van Dijk-Lokkart, E.M., Kinermann, A. (2015). Clinical Tube weaning supported by hunger provocation in fully-tube-fed children. *Journal of Pediatric Gastroenterology and Nutrition, 60(4): 538-543.* Doi:10.1097/MPG.0000000000000647.
- Henton, P.A. (2018). The Issue Is - A call to reexamine quality of life through relationship-based feeding. American Journal of Occupational Therapy, 72, 7203347010. https://doi.org/10.5014.ajot.2018.025650

CONTINUED

CONTINUED

References:

- Nilesch, M., Corkins, M., Lyman, B., Malone, A., Goday, P., Carney, L…. and the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Board of Directors (2013). Defining Pediatric Malnutrition: A Paradigm Shift Toward Etiology-Based Definitions. *Journal of Parenteral and Enteral Nutrition, 37 (4): 460-481.* doi: 10.1177/0148607113479972.
- Owen, C., Ziebell, L., Lessard, C., Churcher, E., Bouget, V., Villenueve, H. (2012). Interprofessional group intervention for parents of children age 3 and under with feeding difficulties: pilot program evaluation. *Nutrition in clinical practice, 27(1): 129-135.* doi: 10.1177/0884533611430231.
- Sangeleti, C., Schveitzer, M.C., Peduzzi, M., Zoboli, E.L.C.P., Soares, C.B. (2017). Experiences and shared meaning of teamwork and interprofessional collaboration among health care professionals in primary health care settings: a systematic review. *JBI database of systematic reviews and implementation reports, 15(11): 2733-2788.* doi: 10.11124/JBISRIR-2016-003016.
- Scott, P.J. (2011). Occupational therapy services to enable patients to thrive following transplantation. *Occupational therapy in health care, 25(4): 240-256.* doi: 10.3109.07380577.2011.600427.

CONTINUED

Questions?

- mollyrej789@gmail.com
- kathryn@healthykidsnutrition.com

CONTINUED