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## Transdisciplinary Care in Inpatient Rehab

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### Objectives

- Define and understand various team models
- Understand the role of PT/OT/SLP within transdisciplinary model
- Identify areas of shared intervention between disciplines
- Identify possible barriers and limitations to use of transdisciplinary model in inpatient rehab (IPR)

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### Types of Team Models

- Single disciplinary
- Multidisciplinary
- Interdisciplinary
- Transdisciplinary

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## Single Disciplinary

Limited scope of patient needs, uses large network of referrals

Limited as patients often have more complex health needs

Example Patient: Healthy teenager with broken arm

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## Multi-disciplinary



- Team members practice "within their traditional disciplinary scope" (Karol)
- Discipline specific goals, often lacks patient input
- Strengths
  - Roles are clearly defined
- Limitations
  - Contradictory expectations and goals can occur from various team members
  - Communication through physician

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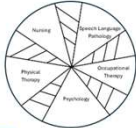
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## Interdisciplinary

Lateral team communication

Well defined roles of discipline competency

- Understanding that overlap exists between disciplines

Strengths

- Goals and responsibilities are shared amongst team members

Weakness

- Goals may not be patient specific
- Contradictory interventions/recommendations

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## Transdisciplinary

"Mutual learning, training and education, and the flexible exchange of discipline-specific" (Gordon)

- Strengths
  - Patient centered priorities and input
  - Team members take responsibility for patient as a whole
  - Team uses specific scope to contribute
- Weakness
  - Limited exposure to the approach in professional school/settings

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## Transdisciplinary (cont.)

- "Fluid Boundaries" (Galvin, Valois, Zweig)
- Share knowledge of own discipline and knowledge between team members for best care
- No discharge of one discipline

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Multidisciplinary	Interdisciplinary	Transdisciplinary
<ul style="list-style-type: none"> <li>Professionals primarily work in parallel</li> <li>Communication is minimal</li> <li>Focus on discipline specific task</li> </ul>	<ul style="list-style-type: none"> <li>Tasks are coordinated</li> <li>Frequent communication</li> <li>Shared goals and responsibilities</li> <li>Discipline roles are maintained</li> </ul>	<ul style="list-style-type: none"> <li>Role release</li> <li>Role expansion</li> <li>Integrated expertise</li> <li>Shared problem solving</li> <li>Unified treatment plans</li> </ul>

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### Team members

Patient	Caregivers/support person	Attending Physician	Resident Physician
Physical Therapy	Occupational Therapy	Speech Therapy	Recreational Therapy
Rehabilitation Technicians	Nursing	Social Work/Case Management	Dietitian
	Neuropsychologist	Respiratory Therapist	

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### PT Roles in TBIs

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Out of bed tolerance

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Safest upright sitting positioning and equipment recommendations

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Transfers including car transfers

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Gait activities

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Stair training

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Balance activities

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Dual tasks and pathfinding activities

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### OT Roles in TBIs

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ADL performance

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IADL performance

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UE function

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Fine motor skills

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Functional Cognition

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Vision

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## SLP Roles in TBIs

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Cognition

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Orientation

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Language

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Swallowing

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Apraxia

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Dysarthria

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Tracheostomy management

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## Role Release



“Willingness to permit other disciplines to perform therapeutic activities normally in the domain of another discipline” (Karol)



Allow others to come into your lane, go into others lane as needed



Deficits do not only occur in discipline specific treatment sessions

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## Team Culture and Transdisciplinary Care



Increased respect within team



Increased understanding of what other team members are doing for the patient



Increased communication on effective strategies for patient

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## “Everything is therapeutic”

- Neuroplasticity
  - Increased opportunity for repetitions
- Client is part of the team
  - Making sure goals are client centered
- Early TBI stages in IPR
  - Getting patients to the edge of bed
  - Participating in appropriate conversation
  - Following commands
  - Assisting in re-orientation

(Marin- Medina et al.) 16

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## Interventions

Walking while scanning for cards on wall

- PT: Working on balance with head turns, attending to busy environment, gait quality
- OT: Visual scanning, reaching, fine motor to grab card, functional cognition
- ST: Dual tasking, functional cognition, confrontation naming

Getting patient out of bed

- PT: Bed mobility, functional strength, sitting balance, transfer
- OT: Dressing for out of bed activity, grooming edge of bed, initiation
- ST: Initiation, functional sequencing, command following, recall of appropriate techniques for transfer

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### Case Study

29-year-old female status post fall with questionable syncopal episode who presented to IPR from outside hospital with severe TBI status post craniotomy for epidural hematoma evacuation with midline shift. Sustained facial and skull fractures with a course notable for seizures, tracheostomy status post decannulation, PEG tube requiring tube feeds. Patient recently a new mom with a 3-month-old daughter at home.

**Presentation on admission**

- Oriented to self only
- Follows verbal commands without difficulty and responds with goal directed responses with fluent speech
- LUE ataxia with finger to nose assessment and LLE sustained clonus

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### Case Study

Patient centered goals – taking care of her kid/playing with kid, return to work, independence for home

OT – Caring for child, morning routine prior to community outing, ADLs, IADLs for home	SLP – Orientation, memory strategies for return to work goals, setting up follow up appointments, executive functioning for planning outing	PT – Walking with carrying baby carrier child, floor transfers, use of AFO, managing crib
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### Cognition is often the biggest barrier in TBIs

Impacts all aspects of mobility, ADLs, and IADL

Skills decrease when cognitive demands increase

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Implement high level cognition into tasks to increase safety and decrease skill break down in more complex settings

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## Implementation of Transdisciplinary Model

- Requires behavior change and mindset change from team members
  - Asking self and new staff members "what other team members are involved?"
  - Vulnerability and trust between staff members
- Client centered goals
- Prioritize shared space for team
- Perform training with various members
- Non-billable unit to account for time spent outside of patient care to add value to patient plan of care

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## Barriers

- Leadership vs team buy into model
- Poor team culture
- Inconsistent staffing
- Not having available staff members
- Lack of team communication

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## Limitations

- Therapist burnout with complex behavior patients
- Needing fresh perspective
- Need for Goal Checking to make sure all team members (including client) believe in the same goals
- Miscommunication through using jargon

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## Transdisciplinary Communication

IPR Weekly Team Conference

MDI huddle

Daily Therapy Huddle

Weekly Discharge Huddle

Conversations in the therapy office

Voalte messages

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## TBI Specific Communication

  
**Behavior Huddle**  
 Weekly Discuss barriers/behaviors and solutions Note in EMR for team to reference

  
**Timed void**  
 Timed void tracker Therapy schedule Patient white board Nursing communication order

  
**Up/Down Schedules**  
 Therapy driven Patient daily therapy schedule Safely encouraging out of bed tolerance Sleep/wake cycle

  
**Constant Observer Binders**  
 Activities from each therapy discipline for patient to do in down time Plan from behavioral huddle Detailed hand off events from shift

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Time	Activity
6:00 AM	Tube Feed + Nursing cares
8:00 AM	Occupational Therapy
9:00 AM	Stay up in chair
9:30 AM	Rest
10:30 AM	Speech Therapy
11:30 AM	Tube Feed + Toileting
12:00 PM	Rest
1:00 PM	Physical Therapy
2:00 PM	Toileting
2:30 PM	Rest
4:00 PM	Tube Feed + Toileting
4:30 PM	Rest
6:00 PM	Tube Feed + Toileting
6:30 PM	Rest
8:00 PM	Tube feed + Toileting
8:30 PM	Bedtime

Smith, J Room # 15		Wednesday March 19, 2025	
7:00	Meal Group	Meal Group	12:00
7:30	toileting	up in chair	12:30
8:00		x	1:00
8:30	OT	ST	1:30
9:00			2:00
9:30	up in chair	bed	2:30
10:00	PT		3:00
10:30		toileting	3:30
11:00	bed		4:00
11:30	toileting	bed	4:30
12:00		Meal Group	5:00

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## Caregiver Involvement



Model Systems TBI Factsheets

- Train caregivers/family on transfers as able
- Provide printed education
- Education on low stimulation
- Agitation and behavior management
- Discharge check list
- Caregiver support/burn out
- Support groups for patient and caregivers

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## BI Task Force



- PHYSICIAN LEAD TASK FORCE
- AGITATED BEHAVIOR SCALE
- QUALITY OF SLEEP
- ORIENTATION VISUALS
- NEW HIRE TRAINING MODULES

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## Monitoring Effectiveness

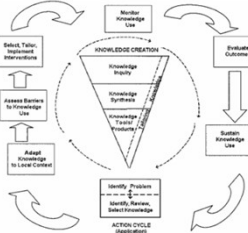


Fig. 1. The Knowledge-to-action framework.

- Use of Knowledge Translation Model
- Managers monitoring falls, complex behavioral patients, HAPI, CHG use, and IRF PAI scores
- Team trialing and monitoring techniques for TBIs

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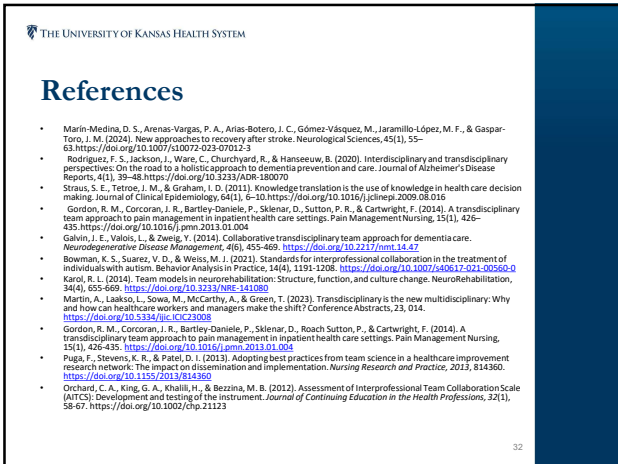
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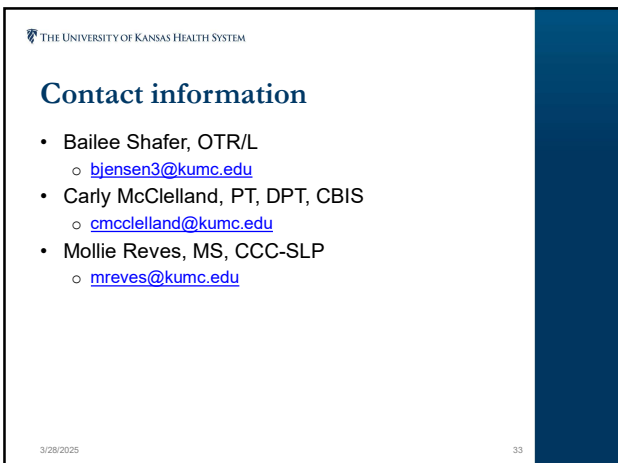
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