Disclosure

I have no relevant financial relationships with any companies related to the content of this course.

Goals and Objectives

- Define Occupation and Occupational Therapy (OT)
- Understand the role of the Occupational Therapist as a member of the multidisciplinary Liver Transplant Team
- Understand common assessments, interventions, discharge recommendations for patients that are pre- and post-liver transplant
- Identify when to consult an occupational therapist for your patients
- Provide practical clinical suggestions and ideas to help enhance patient care and empower your patients to live their lives (with a new liver!) to the fullest
What is an occupation?

“Occupation is the everyday… the things people need to, want, or are expected to do everyday” (Polatajko, 2007)

- Occupations give meaning to our lives
- Create our identity
- Define our life roles and responsibilities

Areas of Occupation

<table>
<thead>
<tr>
<th>Activities of Daily Living (ADLs)</th>
<th>Instrumental Activities of Daily Living (IADLs)</th>
<th>Rest and Sleep</th>
<th>Education</th>
<th>Work</th>
<th>Leisure</th>
<th>Social Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathing</td>
<td>- Care of pets</td>
<td>- Rest</td>
<td>- Formal education participation</td>
<td>- Employment interests and pursuits</td>
<td>- Leisure exploration</td>
<td>- Community</td>
</tr>
<tr>
<td>Dressing</td>
<td>- Child rearing</td>
<td>- Sleep</td>
<td>- Informal education needs, interests and participation</td>
<td>- Job performance</td>
<td>- Leisure participation</td>
<td>- Family</td>
</tr>
<tr>
<td>Toiletting and toilet hygiene</td>
<td>- Communication management</td>
<td>- Preparation</td>
<td>- Employment seeking and acquisition</td>
<td>- Job performance</td>
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<td>- Peer, Friend</td>
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<tr>
<td>Self-Feeding</td>
<td>- Driving and community mobility</td>
<td>- Maintenance</td>
<td>- Retirement preparation and adjustment</td>
<td>- Voluntary exploration and participation</td>
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<tr>
<td></td>
<td>- Financial Management</td>
<td>- Shopping</td>
<td>- Health management and maintenance</td>
<td>- Leisure exploration</td>
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<tr>
<td></td>
<td>- Personal device care</td>
<td>- Religious and spiritual activities and expression</td>
<td>- Safety and emergency maintenance</td>
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<td></td>
<td>- Personal hygiene and grooming</td>
<td>- Shopping</td>
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<td></td>
<td>- Sexual activity</td>
<td>- Shopping</td>
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<td>- Shopping</td>
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</tbody>
</table>

Benefits of Occupations

- Reduce the risk for disability and enhance the recovery process from an ADL disability (Mendes de Leon et al, 2003)
- Social and productive activities are as protective as physical activity in lowering the risk for mortality (Glass et al, 1999)
- Protects against cognitive decline and depressive symptoms (Bassuk et al, 1999)
- Restriction for participation causes physiological deterioration, leading to the loss of ability to perform competently in daily life (Kielhofner, 1992)

Occupational Therapy

American Occupational Therapy Association (AOTA)

- OT is the only profession that helps people across the lifespan to do the things they want and need to do through the therapeutic use of daily activities.
- OT practitioners enable people of all ages to live life to its fullest by helping them promote health, and prevent—or live better with—injury, illness, or disability.
- OT is inherently patient-centered, holistic, dynamic, and optimistic
Occupational Therapy and Liver Transplant

### Acute Care Considerations

- Limited time with patients, short length of stay
  - Simultaneous evaluations, interventions, discharge planning
- Quality metrics and cost reduction
- Medical instability
- Environmental limitations
- Appropriateness of referral
- Care protocols and activity precautions
- Infection control
- Need for flexibility
- Lines, tubes, monitors
- Productivity

### Stages of Liver Transplant

**(Scott, 2011)**

<table>
<thead>
<tr>
<th>STAGE #</th>
<th>COMMON SYMPTOMS</th>
<th>PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decline in health&lt;br&gt;Self-awareness that something is “wrong”</td>
<td>- Fatigue&lt;br&gt;- Gastrointestinal problems&lt;br&gt;- Pains&lt;br&gt;- Acutes&lt;br&gt;- Decreased initiative&lt;br&gt;- Mental health (depression, anxiety, denial, fear, frustration)</td>
<td>- Likely no impact on performance of ADLs and IADLs&lt;br&gt;- Chances of some decline in meaningful occupations</td>
</tr>
<tr>
<td>2. Organ failure&lt;br&gt;Loss of capacity&lt;br&gt;Validation: something is wrong</td>
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*Occupational therapy services likely not indicated*
## Stages of Liver Transplant

### Stage 3: Referral to Transplant Team
- **Mental Health:**
  - High stress, frustration, fear
  - Concern for remaining healthy, yet sick enough for transplant
  - Stigmatization
  - "Patient role"
- **Physical Health:**
  - Labs fluctuate: determine eligibility
  - Frequent BMs
  - Restricted travel
  - Skin integrity
  - Accidents
  - Increased fatigue
  - Malnutrition
  - Muscle loss
  - Water retention
  - Skin breakdown
  - Back pain
  - Abdominal distension
  - Shortness of breath
  - Impaired balance
- **Participation:**
  - Loss of ability to participate in roles begins

### Stage 4: Waiting for the Call
- **Mental Health:**
  - Loss of control
  - Anxiety, fear
  - Loss of capacity and role strain
- **Physical Health:**
  - Encephalopathy (HE) causes forgetfulness, confusion, stress, slowed processing, impaired safety
  - Exacerbation of underlying disorders (depression, adjustment, anxiety)
- **Participation:**
  - Decreased ADLs, IADLs, mobility
  - Travel planning is impacted to stay close to hospital
  - Family education needs

## Pre-Transplant Occupational Therapy Evaluation

### Pre-Liver Transplant ADL and IADL Participation

- >50% unable to participate in one or more ADL/IADLs
- Patients with cirrhosis have functional disability > 80 y/o adult
- ADL and IADL disability is significantly associated with wait-list mortality
- Most common ADL impairments: incontinence and transferring
- Most common IADL impairments: shopping, food preparation

### Predictors of wait-list mortality:
- Toileting
- Transferring
- Housekeeping
- Laundry
- 17% are dependent for medication management

## Pre-Transplant Occupational Therapy Interventions

- Fatigue management
- Energy conservation
- Memory strategies
- Coping and adjustment
- Pain management
- Transfer training
- ADL re-training
- ADL/IADL adaptation
- Communication strategies
- Balance for ADLs
- Sequencing
- Functional Cognition
- Planning for transplant
- Personal goal-setting
- Awareness training and education
- Caregiver education
- Adaptive equipment
- Durable medical equipment
- Home environment safety
- Social support and isolation
- Home exercise programs
- Delirium management
- Breathing techniques
- Relaxation and stress management
- Skin integrity
- Medication management
- Incontinence planning
Incontinence Management Strategies

- Normalize the discussion
- Create a culture of continence promotion
  - Prevent, anticipate, prompt
  - Provide privacy when safety is not a concern
- Set-up environment BEFORE the need for voiding
  - Check for broken equipment
- Habit training with timed voiding schedules
- Protective undergarments (disposable underwear, pads)
- Patient and family education in self-monitoring to recognize patterns around medication and meals.

Post-Transplant Occupational Therapy Interventions

- Abdominal guidelines and activity modification
- Bed mobility
- Compensatory strategies for ADLs
  - Adaptive equipment (AE)
  - Durable Medical Equipment (DME)
- Energy conservation
- Pacing
- Safe progression of activity
- Assistive device training
- Fall prevention
- Fine motor coordination
- Delirium prevention and management
- Family education and training
- Building post-transplant habits
- Education and encouragement for self-care ADLs vs defaulting to caregiver
- ADL training
  - Lower body dressing/bathing
  - Bathing
  - Toileting
  - Grooming
- Potential dialysis education (new occupational role)

Stages of Liver Transplant (Scott, 2011)

<table>
<thead>
<tr>
<th>STAGE</th>
<th>MENTAL HEALTH</th>
<th>PHYSICAL HEALTH</th>
<th>PARTICIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Transplant surgery</td>
<td>Thankfulness, anxiety about survival, fear of future</td>
<td>Cognition and mood swings due to medications</td>
<td>Activity modifications for ADLs and IADLs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delirium</td>
<td>Caregiver training for self-care and cognition</td>
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<td>Wound healing</td>
<td>Medication management</td>
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<td></td>
<td></td>
<td>Pain</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Fatigue</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Reduced activity tolerance</td>
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</tr>
</tbody>
</table>

Delirium Prevention and Management

- Person factors:
  - Physical
  - Early mobilization
  - Address toileting independence
  - Offer drinks during/after OT
  - Work with nursing and family on encouraging food and hydration
  - Cognition
    - Orient and explain goal of OT
    - Stimulate cognition and socializing
    - Education to family
      - Visit, talk, offer, bring personal items
    - Sensory
      - Use personal devices and glasses
      - Lighting
      - Reduce visual distractions

- Environment Factors:
  - Minimize interruptions at night
  - Orientation information in view
  - All needs within reach
  - Glasses, call light
  - Safety signage
  - Move near nursing station
  - Fall prevention

- Occupational Factors
  - Interview patient/family on meaningful activities, habits, routines
  - Give patient choices
  - Perform daily activities
  - Meaningful work and leisure
  - Encourage socialization with family

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Promoting Patient Sleep Hygiene
Goal: Promote optimal sleep performance
Interdisciplinary team approach

- Educate patients on sleep expectations while in hospital
- Pain management
  - Medication
  - Positioning
- Anxiety and depression
- Reduced caffeine in PM
- Increase daytime activity, mobility
- Balance diet and food choices
- Planning for nighttime visits:
  - Void before bed
  - Bed mobility, log rolling
  - Toilet transfers re-training
- Modify environment
  - Noise, temperature, lighting, technology
- Establish a “normal” bedtime routine while staying in hospital
- Coping skills and stress management
- Eye masks, ear plugs
- Communicate sleep preferences with night shift RNs
- Avoid daytime napping

Discharge planning

- PEOP Model as a Framework
- What is the patient’s level of function? What environment will support participation?
- Pre-Transplant
  - Generally back to home with either family assist OR Home Health if “homebound”
  - OT is not considered a stand-alone therapy, must also have Physical Therapy needs
  - Occasional need for placement if poor function, but will impact liver transplant waitlist
- Post-Transplant
  - Preferred discharge: home with either family assist OR Home Health if “homebound”
  - Placement if level of function will not be supported by environment, less ideal
  - SNP < 3 hours of therapy a day
  - Acute Rehab: >3 hours of therapy a day
  - Long-term: Outpatient OT or PT
  - Return to normal functioning, community integration, work, IADLs
  - Physical therapy for core strength after abdominal guidelines lifted

Referrals to Occupational Therapy

- ADL impairments and limitations
- Safety awareness
- Cognitive impairments and mental health
- Medication management barriers and compliance
- Patient and family education
- OTs are NOT just for “safe discharge” planning
- To reduce risk of hospital readmissions (Rogers et al, 2016)
- Timing of referral
  - Delayed referral to OT (and PT) can result in longer length of stays
  - Discharge depends on patient and family readiness and cooperation (Toledo et al, 2013)

Occupational Therapy Pioneer Ideas and Recommendations

- Coming soon in Fall/Winter 2019: Trial acute care liver transplant wellness groups lead by an occupational therapist
- More research is needed for efficacy of occupational therapy in liver transplant
- Consider occupational therapy referrals in outpatient clinics
  - With increased survival rates, many have problems with fatigue, return to valued roles and work, adjustment to new routines to prevent rejections, poor social functioning
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References

- Scott, P. J. (2011). Occupational therapy services to enable liver patients to thrive following transplantation. British Journal of Occupational Therapy, 74(11), 517-523.