OBJECTIVES
• Develop an understanding of the need for clinical competency for therapists treating lymphedema in an advanced practice setting
• Review the development for our lymphedema mentorship program
• Review literature related to competency and mentorship
• Future opportunities for development

Why Mentor?
• Code of Ethics for the Physical Therapist - Principle 6D:
  “Physical Therapists shall cultivate practice environments that support professional development, lifelong learning, and excellence”

Who Gains?
• PATIENTS
• Mentorees
• Mentors
• Colleagues
• Health System – Insurers, physicians
• EVERYONE!

What is Mentorship?
• “Any nurturing process using skills and experience to guide, teach, and encourage a less skilled or experienced colleague for the purpose of promoting professional and personal development”
• “The true essence of mentorship consists of building passion, keeping fresh, making us stronger, and promoting deeper learning.”
What is clinical competency?

- Knowledge
  - Multidimensional
  - Patients as important sources of knowledge
  - Clinical specialty knowledge as a key component of the evaluation
  - Knowledge evolving through reflection

Jensen et al. 1999

What is clinical competency?

- Clinical reasoning
  - Demonstrate self-monitoring skills with selective data gathering, risk taking, and willingness to admit when they don't know
  - Clinical problem solving is collaborating with patients
  - Focus on patient functions and expectations, not the diagnosis.

Jensen et al. 1999

Developing clinical competency

- Physical therapy practice is:
  - Patient centered
  - Complex
  - Broadly based
  - Exciting
- Knowledge is gained by:
  - Practice, lecture, reflection, self-motivated learning

Jensen et al. 1999

Kolb's Learning Styles

- Diverger
  - Seeks personal relevance: WHY?
- Assimilator
  - Seeks facts: WHAT?
- Converger
  - Seeks usability: HOW DOES IT WORK?
- Accommodator
  - Seeks hidden possibilities: SO WHAT NOW?

Kolb 1984
Why did we create our program?
- An established tradition of excellence
- Referrals from University of Pennsylvania Health System Physicians
- Therapists located in multiple sites over large geographic area
- Referrals of complex patients from a large region
- Our organization emphasizes specialty practice- 'Teams'

'Team' Structure
- Many teams of therapists spread across sites with specialty interests/certifications
- Team Leader:
  - Content expert
  - Leader of Special Interest Group
  - Assessment via chart review/observation of practice
  - Program/Therapist development
  - Recruitment

Why did we create our program?
- Entry level training sufficient for basic evaluation
- Advanced skill set advantageous for effective treatment planning
  - "Don’t take off your PT Hat"
  - Evaluate and incorporate treatment for all functional and structural problems
  - Need for additional knowledge of oncology and adjuvant treatment effects

Why did we create our program?
- Oncology knowledge lacking in entry level PTs
  - Common surgical procedures
  - Radiation therapies and side effects
  - Chemotherapies and side effects
  - Cutting edge and new procedures

Why did we create our program?
- Program started in 1999 by Andrea Cheville M.D. and Sarah Stolker PT
- 46 Current and past staff members (4 MDs)
- One of the larger programs for lymphedema management in the country- currently 17 CLTs with an CDT trained MD
- Statistics (2013):
  - 500+ evaluations for lymphedema/CA related
  - 7000+ treatments completed

Why did we create our program?
- Large Comprehensive Cancer Center designated by NCI since 1973
- Related management includes cancer related orthopedic issues, axillary cording, Cancer Related Fatigue (CRF), wound care, and Strengthening After Breast Cancer (SABC)
- Active participation in research projects including the PAL trial

Over 500 lymphedema or cancer related evals in 2012 with over 7000 treatments completed.
Why did we create our program?
• Lymphedema Management requires an advanced skill set in our setting
• In our academic setting, we see many more diagnoses beyond breast CA
  – Head and Neck Cancers
  – Morbidly Obese
  – Genital Lymphedema
  – Failures from previous treatment
  – Many unusual presentations

Women’s Health Residency
• Effort to develop began in 2010
• Previous experience with development of an orthopedic residency
  “Oh by the way- we will need 12 weeks of programming for the residency in lymphedema management”
• Practice Description for guidelines?

Women’s Health Residency
• First stop: Description of Specialty Practice
  – Evaluation
    • screen for lymphedema
    • Integumentary tissue quality/soft tissue swelling
  – Diagnosis
    • Musculoskeletal dysfunction assoc. with lymphedema
  – Prognosis
    • Consider Risk Factor of lymphedema w/ long term prognosis
    • Post Mastectomy/ Axillary Dissection safety concerns

Women’s Health Residency
• First stop: Description of Specialty Practice
  – Intervention
    • Behavioral techniques for lymphedema management and prevention
    • Manual Lymphatic Drainage
    • Prescription of Compression garments and compression bandaging
  – Outcomes Assessment

Women’s Health Residency
• Development of a consensus of what lymphedema material to cover in programming with guidelines in mind
• Team approach to identification of topics to be covered
• Modules developed/reviewed by many team members with existing lectures and literature as launching point
WHR Lymphedema Modules

- A&P and Basic Skills
- Breast Reconstruction
- General Oncology
- Axillary Web Syndrome
- Breast and Torso Lymphedema
- Clinical Examination of the Shoulder
- Differential Diagnosis

Transition of WHR to LM

- Expanded on WHR modules and formalized existing mentoring process
- Existing process was:
  - Study binder
  - 3 weeks of 1:1 time with Team Leader
  - Informal ongoing support from team and Team Leaders after that point
  - "Grab and go"
  - Works only if mentor/mentoree located at same site

Original Lymph Mentoring vs. Updated/Current Lymph Mentoring

<table>
<thead>
<tr>
<th></th>
<th>WHR</th>
<th>LM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocks</td>
<td>3 weeks 1:1</td>
<td>12 weeks of lymphedema or oncology (9 blocks total)</td>
</tr>
<tr>
<td>Costs</td>
<td>Basic Competencies</td>
<td>Basic Competencies + Advanced competencies</td>
</tr>
<tr>
<td>Notes</td>
<td>&quot;Grab and go&quot;</td>
<td>11 modules plus self-learning</td>
</tr>
<tr>
<td>Costs</td>
<td>Roughly 12 weeks</td>
<td>Roughly 3 months, 16 weeks total</td>
</tr>
<tr>
<td>Notes</td>
<td>Roughly 1200 paid, 175 unpaid</td>
<td>Roughly 50 hours</td>
</tr>
</tbody>
</table>

Step by step…

- Development of a tentative plan by team leaders and WHR coordinator with input from managers and senior therapists
  - Structure based on WHR
  - Need to balance costs vs benefits
  - Additional modules and information necessary
  - Involvement of entire team in process
    - Input, contribution of content, updates, and participation

Organization emphasizes clinical education

Step by step…

- Selected senior team members for mentorship and instruction
  - Based on experience, clinical expertise, teaching skills, and interest
    - Minimum 4 years lymph experience was chosen as goal
      - Average 15 (range 9-26 years) among primary mentors currently
    - Observational competencies and assessment by team leaders
    - Input from managers
    - Chart reviews, clinical education, areas of special interest, formal teaching

Step by step…

- Creation of the modules
  - Identification of necessary topics for advanced practice beyond WHR modules
  - Team input
  - Module structure and schedule created
  - Content review by expert clinicians on team and team leader
Module Structure

• Description of module
• Objectives of module
• Suggested literature for review
  – research articles
  – book excerpts
  – related materials

Module Structure

• Lecture
  – powerpoint
• Competencies/Assessments
• Other learning opportunities
  – surgery/clinical observation
• Case studies

Mentoring Schedule

• Approximately 20 weeks in duration
• 3-4 weeks 1:1 full time with expert clinician:
  – Shadowing, co-treating, observed treatments
  – Successful demonstration of basic competency
  – Therapist maintains own caseload
  – weekly 1 hr meetings for caseload review with “primary mentor”
  – ongoing “advanced” modules weekly to bi-weekly

Primary mentor not necessarily therapist that was shadowed depending on site location.

4 therapists identified as primary mentors with team leader support

Based on expertise and experience

Average # years 16 years

Lymphedema Modules

1. Basic skills
2. Head and Neck
3. Orthopedic (Breast and H&N)
4. Oncology
5. Breast and Trunk Lymphedema
6. Breast Reconstruction

7. Melanoma and Sarcoma
8. Primary Lymphedema
9. Acute Care/Gential
10. Wound Care
11. Risk Assessment
12. Palliative Care

Module #1: Basic Skills

• 1A: Anatomy and Physiology
• 1B: Basic Skills (UE and LE)
  – MLD
  – Bandaging
• 1C: Differential Diagnosis
• 1D: Compression Garments and Devices (ie. Bandage Alternatives)

Module #1: Basic Skills

• Rudimentary knowledge on garments only from available training programs
  • Advanced presentations of lymphedema
  • Custom garment fitting
  • Bandage alternatives
  • Custom made compression when needed
  • Sewing skills are necessary for genital, H&N and truncal applications
Module #2: Head and Neck

- Specialty population
  - Complexity of co-morbidities
- Roughly 30% of our lymph referrals
  - Large numbers of H&N CA patients treated within system
  - Strong physician support for lymphedema and rehab services
- Not well covered in basic course

Module #2: Head and Neck

- Surgical Intervention and management
  - TORS (Transoral Robotic Surgery/ Neck Dissections)
- Chemo/Radiotherapy
- MLD
- Compression garments
  - Fascioplasty and compri lan customized
- Functional taping
- Musculoskeletal interventions covered in separate module

Module #3: Orthopedic Considerations of Breast and H&N

- Shoulder dysfunction
- Nerve palsies
  - SANP
  - Plexopathies
- Posture
- C-spine
- TMJ

Module #4: Oncology

- Pathophysiology of CA
- Primary treatment of tumors
  - Surgical
  - Chemotherapy
  - Radiation
- Chemo
  - Commonly used agents reviewed
  - Techniques reviewed
- Radiation
- Side effects of primary treatment

Module #4: Oncology

- Patterns of Metastasis of common CA dx
  - Presentations
  - Red flags
- Oncologic Emergencies
  - SVC
  - Cord compression
  - Neutropenic fever
- Exercise guidelines
  - SABC
  - AMA and ACSM recommendations re oncology
  - Blood count guidelines
Module #5: Breast and Trunk Lymphedema
- Anatomy
- Surgery
- MLD
- Compression options
- Treatment planning
- Functional taping

Module #6: Breast Reconstruction
- Surgical interventions
  - Primary treatment
    - Lumpectomy vs Mastectomy
    - SLN vs ALND
  - Reconstructive techniques
    - autologous
    - implant
  - Planned addition: VLNT
- Musculoskeletal implications
- PT interventions

Module #7: Primary Lymphedema and Lipedema
- Genetics
- Differential diagnosis
- Treatment planning
  - goal setting
  - expectations
  - education regarding other medical management

Module #8: Melanoma and Sarcoma
- Etiology
- Intervention and medical management
  - surgery
  - radiation
  - chemo
  - immunotherapy
- Prognosis

Module #9: Acute Care and Genital
- Acute care management and triage
  - consultative
  - maintenance of OP course of care
  - short term management
- Genital edema
  - common in ICU and acute care setting
  - primarily male
  - customized compression strategies
- Lecture and observation: 2 hours, 2 days apart

Module #10: Wound Care
- Etiology
- Management options
- Treatment planning
  - dressings
  - bandaging
- Goals
  - Garment and bandage alternative choices to accommodate dressings

DEBULKING or other RISK MEDICAL PROCEDURES
Module #11: Assessment of Risk
- Risk factors
- Risk reduction
- Assessment of risk
- Counseling

Module #12: Palliative Care and Hospice
- Spectrum of care
  - Rehabilitative to palliative
- Observation of inpatient care
- Variations in treatment planning
- Goal setting
  - Psychosocial implications for management
  - Family training

Competency Testing
- Basic skills-
  - Required prior to scheduling of independent caseload
- Advanced skills
  - Expectation of development over time
  - "I felt like it took me a full year before I felt confident to treatment plan and treat all comers without some consultation"

Competency Testing
- Types of competency testing
  - Checklist
    - Observed
  - Oral assessment of knowledge
- Case studies
  - Multiple choice and short answer tests
  - Chart review
    - Checklists

Additional Learning Experiences
- Observations with MD's and NP's
  - Radiology
  - Oncology
  - Surgery
  - Clinic appointments
  - Acute care
- Observation in Palliative Care

SIG Programming
- Monthly meetings for all specialty teams
- Our content and schedule:
  - Alternating monthly schedule
    - 1 hr administrative phone meeting
    - 2 hr admin/clinical meeting
  - Additional administrative meetings as necessary
    - Training in electronic medical record etc
- Therapists and MD's
SIG Programming

• Clinical meetings
  – MD lectures
  – Vendor visits
  – Staff presentations
  – Skill review
• Quarterly colloquia
  – open to area therapists and MD’s
  – Networking
  – Development of referral base

Retention of advanced clinicians

• Why is this critical?
  – unable to hire clinicians with the advanced skill set required
  • 46 therapists/4 MDs on team since inception
  – Costs associated with training
  • 1 year required after CDT training (employer paid)

Costs Associated

• 135 hour lymphedema training program
• Estimated non-billable/non-treatment hours spent mentoring
  – First 3 weeks = 120 hrs
  – Modules = 50 hrs per staff member
    • mentors + mentees
    • minimum 100 hrs
  – Weekly feedback meetings = 1 hr x 17 weeks per person = 34 hrs
• Grand total = 254 hours for 1 mentoree

Retention of Advanced Clinicians

• Factors for retention
• Career growth
• Job satisfaction
• Awareness and support given by senior team members related to aspirations of junior team members

Current Feedback

• Administrative
  – suggested self directed learning for more modules
• Mentors
  – time allotted for module increase/decrease
• Mentorees

Challenges

• Support from administrative level
  – multiple meetings and discussions
• Rapid growth and expansion of facilities
  – experienced staff spread over multiple sites
  – focused recruitment resulted in need to mentor multiple therapists simultaneously and consecutively

ADMIN:

MENTORS:

Teresa: The experience I had at Penn was invaluable for my career. The skills sets I gained through the mentorship program are unmatched by any future clinical experiences I have had.
Challenges

• Requirements and case mix associated with WHR
• Coordination of schedules for WHR, mentors, mentorees, sites (staffing concerns)
• Transition to outpatient for inpatient staff
  – Patient population, documentation, treatment planning throughout arc of care

AGE RELATED

• GEN X (and some mentors are Baby Boomers!!)
• Millennials (Gen Y)
• Expectations of both mentor and mentoree were spelled out

Where do we go from here?

• Learning and teaching styles vary
  – Better assessment tools?
  – Additional training for mentors
• Strain on resources:
  – Max of 2 therapists being mentored
  – More independent study, focus on hands on/practical skills, reflection?

Information Retention Rate Based on Instructional Strategies

<table>
<thead>
<tr>
<th>Instructional Strategy</th>
<th>Retention Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching others</td>
<td>90</td>
</tr>
<tr>
<td>Practicing by doing</td>
<td>75</td>
</tr>
<tr>
<td>Discussion</td>
<td>90</td>
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<tr>
<td>Demonstrated skill</td>
<td>75</td>
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<tr>
<td>AV presentation</td>
<td>20</td>
</tr>
<tr>
<td>Reading</td>
<td>10</td>
</tr>
<tr>
<td>Lectures</td>
<td>5</td>
</tr>
</tbody>
</table>
Where do we go from here?

• Convert powerpoint lecturing to on-line independent review then 1:1 Q+A plus enrichment
• Developing a more formal program manual
  – based on WHR manual

Where do we go from here?

• Updating the content is a constant task
  – Team currently completing annual review
  – Different member from originator completes review
  – Advantageous to maintain/challenge h level knowledge of current team members
• Possible extending employment obligation post mentoring to 2 years?

QUESTIONS??

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