



THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center
Making Cancer History®

Building Oncology Rehabilitation Programs Across the Age-Span and Care Continuum

AOTA Specialty Conference:

Occupational Therapy's Distinct Value in Oncology Across the Lifespan

Brent Braveman, PhD., OTR/L, FAOTA
Director, Department of Rehabilitation Services

Objectives

1. Review critical elements of building successful oncology rehabilitation programs.
2. Describe strategies for scaling program development efforts to various settings.
3. Describe strategies for scaling staff training and assessment and development and assessment of competencies given limited resources.
4. How can we focus on collaboration and avoid competition?

Evolution of Cancer Care

1980s

- The majority of cancer care delivered in large specialized tertiary cancer centers

Present day

- Most cancer care delivered in physician-owned practices
 - Earlier detection
 - Improved treatments (less radical surgery, combined-modality therapy, and adjuvant endocrine therapy)
 - Hospitalized patients have shorter stays

Alfano CM, Ganz PA, Rowland JH, Hahn EE. Cancer survivorship and cancer rehabilitation: revitalizing the link. J Clin Oncol 2012;30(9): 904-6.

Recent Demographics of Cancer in the U.S.

- In 2016, an estimated 1,685,210 new cases of cancer will be diagnosed in the United States and 595,690 people will die from the disease.
- The most common cancers in 2016 were projected to be breast cancer, lung and bronchus cancer, prostate cancer, colon and rectum cancer, bladder cancer, melanoma of the skin, non-Hodgkin lymphoma, thyroid cancer, kidney and renal pelvis cancer, leukemia, endometrial cancer, and pancreatic cancer.
- The number of people living beyond a cancer diagnosis reached nearly 14.5 million in 2014 and is expected to rise to almost 19 million by 2024.

National Cancer Institute. (2016). Cancer Statistics. Online at: <https://www.cancer.gov/about-cancer/understanding/statistics>.

From Cancer Patient to Cancer Survivor: Lost in Transition

“Without specific training dedicated to learning the nuances of oncology rehabilitation, it can be challenging to become skilled and effective providers. This can be a daunting task for those already in practice who may feel overwhelmed by the knowledge they must accumulate to expertly treat cancer patients. In addition, there is a relative paucity of continuing education coursework and mentors to prepare existing clinicians for such practice.”

Institutes of Medicine. (2005). From cancer patient to cancer survivor: Lost in transition. Online at: <http://www.iom.edu/~media/Files/Report%20Files/2005/From-Cancer-Patient-to-Cancer-Survivor-Lost-in-Transition/recommendations.pdf>

Current State of Practice

Inpatient

- Academic
 - Acute Care Hospitals (ACHs)
 - Academic Cancer Center
 - Academic Medical Center
- Inpatient Rehabilitation Facilities (IRFs)
- Community
 - Acute Care Hospitals (ACHs)
 - Non-academic Cancer Center
 - Community Hospital
- Long-term Acute Care Hospitals (LTACHs)
- Skilled Nursing Facilities (SNFs)
- Veterans Administration
 - Acute Care Hospitals (ACHs)
 - Inpatient Rehabilitation Facilities (IRFs)

Outpatient

- Academic
- Community
- Veterans Administration
- Day treatment Programs
- Home Rehabilitation
- Gym-based

(Stubblefield, Raj, Braveman, Padgett & Joe, 2016. Rehabilitation Models for Clinical Care. Online at: https://clinicalcenter.nih.gov/rmd/pdf/group_1.pdf)

Developing Communities of Practice

- AOTA-oncology forum on OTConnections
- APTA-Oncology Section
- ACRM-Cancer Rehabilitation Networking Group

The Cancer Care Continuum

- **Pretreatment**
Newly diagnosed, no treatment initiated
- **Active Treatment**
Presently receiving treatment with a curative goal
- **Maintenance**
Long-term therapy to maintain remission
- **Post treatment**
Medical treatment is complete with no evidence of disease
- **Palliative care**
 - Palliative treatment for incurable cancer
 - Optimize comfort
 - Decrease caregiver burden
 - Patient-centered goals

Stubblefield, M. D., & O'Dell, M. W. (Eds.). (2010). *Synopsis of Clinical Oncology*. Demos Medical Publishing

Rehabilitation Across the Cancer Care Continuum

Stage of Care	Example of Rehabilitation Interventions
Prevention	Lifestyle redesign, healthy behaviors, exercise and weight loss
Early Detection and Screening	Primary and secondary prevention of functional deficits
Diagnosis	Early intervention to maintain function and promote positive psychological health. Prepare clients for intervention. Pre-rehabilitation.
Treatment	Fatigue, cognition, ADL, IADL, mobility etc., symptom management, medication management, falls reduction.
Survivorship	Lifestyle redesign, healthy behaviors, exercise and weight loss
End of Life Care	Full range of interventions promoting function and self-determination, goal attainment

Critical Elements in Program Development

Choosing a Conceptual Practice Model

1. Does the model specify the underlying mechanisms of action necessary to deal with the occupational problems and challenges faced by the client group?
2. Is the evidence sufficient to support application of the model to the client group and the occupational problems that they experience?
3. Does the model fit with the social, cultural, political, professional and financial contexts in which the program must be implemented?
4. Does implementation of programming based on the model have any special requirements for space, equipment or personnel?

Braveman, B. (2008). Program Development. In G. Kielhofner's *Model of Human Occupation: Theory and Application, Fourth Edition*, pp. 442-465. Philadelphia: F.A. Davis

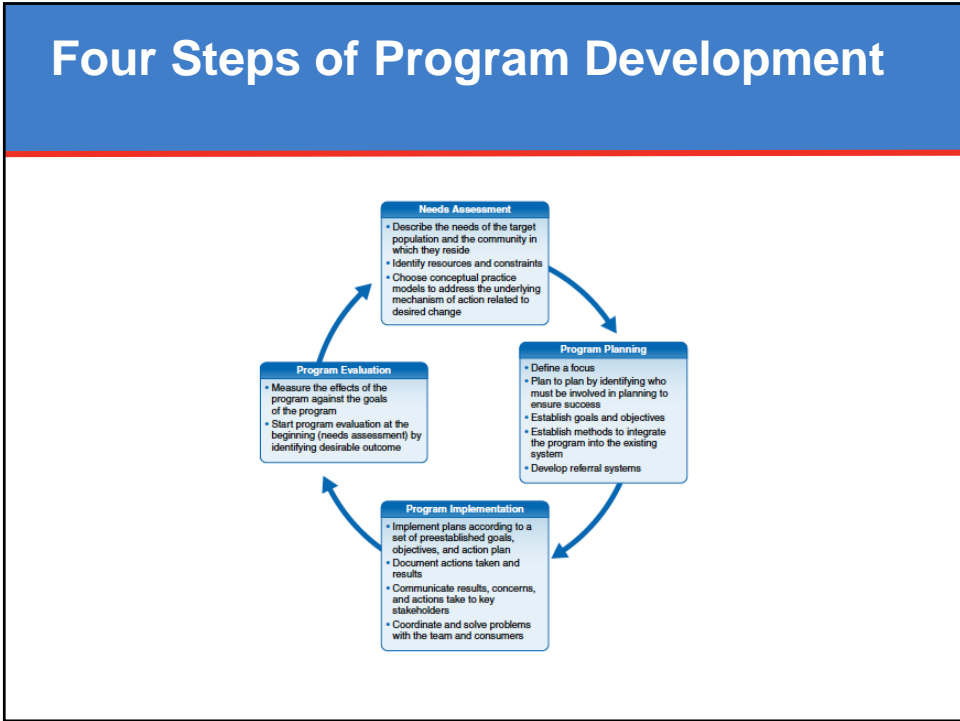
Program Development in Occupational Therapy

- The process for planning intervention is similar whether you are planning individual intervention for a single client, developing a protocol for a group of clients with the same diagnosis/functional challenge or developing a broad program.
 - Key principles include:
 - Use of a guiding set of theories/conceptual practice models
 - Application of current evidence
 - Application of formative and summative program evaluation

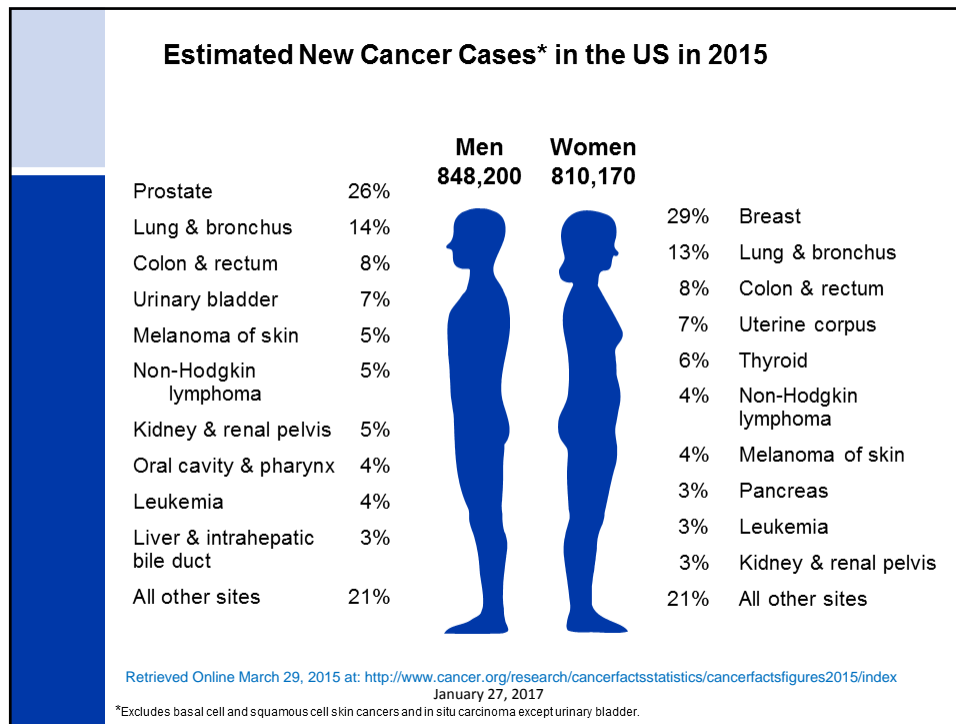
Braveman, B. (2016). Developing evidence-based occupational therapy programming. In B. Braveman's *Leading & Managing Occupational Therapy Services: An Evidence-based approach*, pp. 375-410. Philadelphia: F.A. Davis

Developing OT Services

- Occupational Profile
- Analysis of Performance
- Intervention Plan
- Intervention Implementation
- Intervention Review
- Outcomes
- Needs Assessment
 - Identify needs
 - Identify resources & constraints
- Program Planning
 - Establish goals and objectives
 - Ongoing formative evaluation
- Program Implementation
 - Document actions
 - Communicate with stakeholders
- Program Evaluation
 - Outcomes



- ## Key Elements of Program Success
- Client needs assessment
 - Customer needs assessment
 - Assessing and building competency
 - Professional development
 - Knowledge
 - Clinical skills
 - Clinical sophistication



The Population of Persons with Oncology

Primary forms of cancer (where cancer originates):

- Melanoma
- Carcinoma
- Sarcoma
- Leukemia
- Lymphoma, Multiple Myeloma
- Central Nervous System

12 most common symptoms

<ul style="list-style-type: none"> • Weakness • Dry mouth • Anorexia • Depression • Pain • Insomnia 	<ul style="list-style-type: none"> • Swollen legs • Nausea • Constipation • Vomiting • Confusion • Dyspnea
---	--

Impairments in Cancer Survivors

- Neuromuscular
 - Cerebroopathy
 - Myelopathy
 - Radiculopathy
 - Plexopathy
 - Neuropathy
 - Polyneuropathy
 - Mononeuropathy
 - Mononeuropathy Multiplex
 - Ganglionopathy
 - Small Fiber
 - Myopathy
 - Disorders of Neuromuscular Transmission
 - Pain
- Musculoskeletal
 - Tendonitis
 - Adhesive Capsulitis
 - Epicondylitis
 - Tenosynovitis
 - Spolndylosis
 - Spinal Instability
 - Fracture
 - Impending Fracture
 - Arthritis
 - Enthesopathy
 - Osteoporosis
 - GVHD
 - Scoliosis
 - Bony Metastases
 - Pain
- Functional
 - Lymphedema
 - Fatigue
 - Psychiatric
 - Cognitive
 - Autonomic
 - Cardiac
 - Pulmonary
 - Endocrine
 - Gastrointestinal
 - Urinary
 - Genitourinary
 - Debility/frailty
 - Balance dysfunction

Stubblefield, Raj, Braveman, Morris, Padgett & Joe, 2015, NIH Cancer Rehabilitation Symposium, Online at: http://clinicalcenter.nih.gov/rmd/pdf/group_1.pdf
 Brent Braveman PhD, OTR/L
 FAOTA January 27, 2017

Cancer Treatments

- Surgical removal of cancer cells/tumors from the body.
- Radiation therapy focused on killing cancer cells and shrinking tumors.
- Chemotherapy using drugs to kill cancer cells.
- Immunotherapy focused on strengthening and using a person's immune system to fight cancer.
- Hormone therapy uses hormones to slow or stop cancer cell growth.
- Stem cell transplants which restore blood-forming cells destroyed by high dose chemotherapy or radiation.

Assessing Patient Needs

	Fatigue	Cognition	Pain	Pelvic Floor
Breast	✓	✓		
Leukemia	✓	✓		
Head/Neck	✓	✓	✓	
Ortho			✓	
GYN				✓
Brain/Spine (Neuro)	✓	✓		

Brent Braveman PhD, OTR/L,
FAOTA

January 27, 2017

Assessing Customer Needs

	Information	Outcomes	Adequate Service	????
Physicians	Green	Yellow	Yellow	
APN's	Green	Yellow	Yellow	
PA's	Green	Yellow	Yellow	
Nurses	Yellow	Yellow	Yellow	
Payers	Green	Green	Green	
Community partners	Red	Red	Red	

Brent Braveman PhD, OTR/L,
FAOTA

January 27, 2017

Sample applications of research strategies, tools, and methodologies within the steps of program development

Research strategy, tool or methodology	Needs Assessment	Program Planning	Program Implementation	Program Evaluation
Questionnaires and Surveys	Identify needs and desires of internal and external customers	Determine customer preferences, validate perception of needs, and gather data to plan for personnel, equipment and other programmatic needs	Monitor and improve staff satisfaction, identify opportunities for continuous quality improvement efforts, facilitate communication with key stakeholders	Gather information during formative and summative evaluation of customer satisfaction and assessment of outcomes
Record Reviews	Gather demographic data, rates of incidence, prevalence and service utilization	Establish baseline benchmarks for productivity and financial monitoring as well as assessment of outcomes	Determine levels of productivity, compliance to accreditation or other standards and collect trend data to help plan for financial management and budgeting	Gather necessary data for participation in database benchmarking of customer satisfaction, financial performance or outcomes
Interviews or Focus Groups	Identify needs and desires of internal and external customers	Garner support of key stakeholders, identify roadblocks to success, validate the focus of your product or service, collect information on competitors	Plan and conduct human resource functions including performance appraisal and staff development	Explore critical incidents to learn about cases in which customer expectations or outcomes were either surpassed or not met
Observation	Visit existing programs to learn about space needs and space design, work flow, and customer expectations	Assure compliance with accreditation and safety standards and gather information to help plan continuous quality improvement and other evaluation systems	Become more familiar with the challenges and obstacles faced by staff in service delivery and communicate a desire for open communication	Carry out human resource functions including assessment of competency or performance appraisal

Brent Braveman PhD, OTR/L, FAOTA
January 27, 2017

Scaling to Size: One size does not fit all...

- Do no harm
 - But understand your risks and in many settings they may not be as great as you fear
- Self-assess strengths & weaknesses
 - Clinically
 - Culturally

Scaling: Do no harm

Effect of Exercise on Cancer-Related Fatigue: A Meta-analysis

Tomlinson, Deborah MN, RN; Diorio, Caroline HBSc; Beyene, Joseph PhD; Sung, Lillian MD, PhD

American Journal of Physical Medicine & Rehabilitation

Issue: Volume 93(8), August 2014, p 675-686


[Breast Cancer Research and Treatment](#)

November 2014, Volume 148, [Issue 2](#), pp 249-268

Safety and efficacy of progressive resistance training in breast cancer: a systematic review and meta-analysis

Authors

[Authors and affiliations](#)

Birinder S. Cheema , Sharon L. Kilbreath, Paul P. Fahey, Geoffrey P. Delaney, Evan Atlantis

Scaling: Do no harm

Effect of Exercise on Cancer-Related Fatigue: A Meta-analysis

Tomlinson, Deborah MN, RN; Diorio, Caroline HBSc; Beyene, Joseph PhD; Sung, Lillian MD, PhD

American Journal of Physical Medicine & Rehabilitation

Issue: Volume 93(8), August 2014, p 675-686

[Breast Cancer Research and Treatment](#)

November 2014, Volume 148, [Issue 2](#), pp 249-268

Safety and efficacy of progressive resistance training in breast cancer: a systematic review and meta-analysis

Authors

[Authors and affiliations](#)

Birinder S. Cheema , Sharon L. Kilbreath, Paul P. Fahey, Geoffrey P. Delaney, Evan Atlantis

Prostate Cancer and Prostatic Disease (2013) **16**, 328-335; doi:10.1038/pcan.2013.22; published online 6 August 2013

Safety and efficacy of resistance exercise in prostate cancer patients with bone metastases

P Cormie¹, R U Newton¹, N Spry^{1,2,3}, D Joseph^{1,2,3}, D R Taaffe^{1,4} and D A Galvão¹

Scaling: Self-Assessment

- Personal knowledge & skills
 - We need experts but you don't have to be an expert in everything
 - Keep expectations reasonable within a context of safety
- Assess your network
 - Do you have the necessary level of access for day-to-day critical issues?
 - Do you have contacts and resources for developing future efforts?

Environmental Scanning (Clinical)

- American Occupational Therapy Association
- American Cancer Society
- National Cancer Institute
- American Congress of Rehabilitation Medicine
- National Comprehensive Cancer Network
- American Physical Therapy Association
- American Society of Clinical Oncology

Environmental Scanning (Policy)

- America's Health Insurance Plans (Professional)
- American Enterprise Institute (Conservative)
- Brookings Institute (Progressive)
- Cato Institute (Libertarian)
- Commonwealth Fund (Liberal)
- Heritage Foundation (Conservative)
- Kaiser Family Foundation (Independent)
- Rand Corporation (Independent)
- Urban Institute (Liberal)

<http://www.thebestschools.org/features/most-influential-think-tanks>

Key Elements of Program Success

- Client needs assessment
- Customer needs assessment
- Assessing and building competency
- Professional development
 - Knowledge
 - Clinical skills
 - Clinical sophistication

Training and Education

Training and Education Requirements

- Practitioners focusing in oncology need understanding of:
 - Types of cancer, their progression and impact
 - Treatments and side-effects including chemotherapy, radiation and surgical interventions
 - Fatigue
 - Mild Cognitive Impairment
 - Neuropathy and neurological function
 - Contraindications to treatment (lab values and impact on participation in self-care, exercise, mobility etc.)
 - Age specific factors and role transitions
- May consider specialty training/certification
 - Lymphedema/MLD
 - Cognition (A-One)

Training and Education Requirements

- MD Anderson provides a comprehensive 8-12 week orientation:
 - Associate patient’s aberrant clinical presentation with presenting lab values
 - Recognize symptoms that may indicate an oncology emergency
 - Understand basic oncology with respect to statistics, external and internal risk factors, mechanisms of tumor growth and ability to metastasis and grading and staging of tumors
 - Review of cancer therapy modalities currently used in the management of the patient and how each modality presents with potential impairments that impact the overall function of the patient
 - Review the five paradigms of cancer rehabilitation and define the therapists unique contribution within each of the paradigms

Training and Education Requirements

- Comprehensive assessment of competency program :

Employee Name:			
Competency: P7 - Thoracic and Cardiovascular Surgery			
	Competent	Not competent	Key O = Observation D = Return Demonstration T = Test 1 = 1 on 1 V = Verbally (Please circle one)
1. Demonstrates and understands use of telemetry monitor.	<input type="checkbox"/>	<input type="checkbox"/>	D, V
1. Understands and demonstrates proper chest tube management.	<input type="checkbox"/>	<input type="checkbox"/>	D, V
1. Able to verbalize stable vital signs and implications for therapy.	<input type="checkbox"/>	<input type="checkbox"/>	V
1. Verbalizes sternal precautions and relation to ADL; can locate handout to place on patient's wall.	<input type="checkbox"/>	<input type="checkbox"/>	V
1. Understands different forms of oxygen administration and can safely transfer to appropriate portable oxygen unit when indicated.	<input type="checkbox"/>	<input type="checkbox"/>	D, V, O
1. Understands how to check for pulmonary embolism diagnosis in chart and therapy protocol after new diagnosis.	<input type="checkbox"/>	<input type="checkbox"/>	D, V
1. Understands cardiac precautions and implications for therapy.	<input type="checkbox"/>	<input type="checkbox"/>	V

Training and Education Resources

- American College of Rehabilitation Medicine Conference: Oncology track (Atlanta, Oct 23-28, 2017)
- American Cancer Society
- Turning Point Breast Cancer Rehabilitation (<https://myturningpoint.org>)

AOTA Fact Sheets:

- [The Role of Occupational Therapy in Oncology](#) (Longpré & Newman)
- [The Role of Occupational Therapy in Palliative Care](#) by Claudine (Campbell & Munoz)
- [Occupational Therapy's Role in Breast Cancer Rehabilitation](#)

AOTA Cancer Practice Guidelines Coming in 2017

Training and Education Resources

- AOTA offers an Online Course titled **“Occupational Therapy's Unique Contributions to Cancer Rehabilitation.”** It includes 4 lessons which are:
 - Lesson 1: Cancer Basics*
 - Lesson 2: Medical Rehabilitation Principles in Oncology*
 - Lesson 3: Complex Oncology Symptoms*
 - Lesson 4: Oncology-Related Symptoms and Occupational Therapy's Role Case Study*
- MSKCC Cancer Rehabilitation Symposium
 - Targeted audience: physicians, psychologists, physical therapists, occupational therapists, physical and occupational therapy assistants, nurses, nurse practitioners and other healthcare professionals interested in cancer rehabilitation (See <https://www.mskcc.org/events/symposium/second-annual-rehabilitation-symposium/form>).

Training and Education Resources

- AOTA Conference presentations 2017
 - 25 posters
 - 4 short courses
 - Research Panel
- AOTA Oncology Specialty Conference January 27-28, 2016

Training and Education Resources

- APTA Oncology Section
 - <http://www.oncologypt.org/home-page.cfm>
 - Educational events
 - Oncology Rehabilitation Journal
 - Public Resources (PT Oncology Fact Sheets)
 - Public Resource Library (links to public sites)

Occupational Therapy Program Development Resources

- Braveman, B. (2016). Developing evidence-based occupational therapy programming, pp. 374-410. In Braveman, B, *Leading & Managing Occupational Therapy Services: An evidence-based approach*. Philadelphia: F.A. Davis
- Braveman, B. Kielhofner, G., Belanger, R., & Llerena, V. (2008). Program Development, pp. 442-465. In, Kielhofner, G. (Ed.) The Model of Human Occupation: Theory and Application 4th Edition. Baltimore: Williams & Wilkins.

The CARF Interdisciplinary Model

Cancer rehabilitation is an integral component of quality cancer care. The cancer rehabilitation specialty program focuses on strategies to optimize outcomes from the time of diagnosis through the trajectory of cancer in an effort to prevent or minimize the impact of impairments, reduce activity limitations, and maximize participation for the persons served.

PREVENTIVE

- Addresses reduction of risks through initial and ongoing assessments
- Educates and fosters self-management
- Addresses wellness, health promotion, and services that prevent illness
- Collaborates with acute services

SUPPORTIVE

- Identifies mechanisms for coordination, communication, and collaboration between providers
- Facilitates specialized services, advocacy, and access to community support and resources
- Addresses the impact of cancer on functioning systems of the persons served

RESTORATIVE

- Addresses the impact of cancer on physical, psychological, social, and emotional function and performance
- Provides/coordinates for resources, services, supports, and/or interventions to address restorative needs
- Disseminates knowledge and application of evidenced-based practices to the field of cancer rehabilitation
- Provides education to persons served and their healthcare team systems as the effects of cancer and its treatment

PALLIATIVE

- Collaborates with palliative services
- Gives opportunities for expression of final wishes, provides education on end-of-life choices
- Provides for contact between persons served and the program following discharge/transition

Commission on Accreditation of Rehabilitation Facilities, 2014 at <http://www.carf.org/cancercare/>



<http://starprogramoncologyrehab.com/>

“Our mission is to assure every cancer survivor in the U.S. has access to high quality cancer rehabilitation services. The STAR Program is a turnkey solution that enables hospitals and cancer centers to provide reimbursable rehabilitation services to patients and survivors before, during and after cancer treatment.”

STAR Certification Process:

- Gap Assessment
- Train the Team
- Implement Protocols
- Measure Outcomes and Accelerate Success

(NOT AN ADVERTISEMENT NOR ENDORSEMENT)

Precautions & Medical Complexity

- Safety & do no harm
- Disease and medications can affect HR, Bp, vision, cognitive status, appetite, metabolism.
- Lab values including red and while blood cell counts, hemoglobin and hematocrit
- Coagulation times
- Metabolic panels (blood sugar, calcium, potassium etc.)

Radiology & Imaging

- CT cans, MRIs, ultrasounds, & Xrays
- MRI may show pathologic fractures limiting weight bearing
- Metastatic disease to the brain could warrant cognitive screening

Thanks for attending!

Questions?



Discussion?



Contact Information
Brent Braveman PhD, OTR/L, FAOTA

Brent Braveman, PhD, OTR/L, FAOTA
bbraveman@mdanderson.org January 27, 2017