

Tuesday March 3, 2020 8:00 AM - 8:45 AM Keynote

1001 Understanding the Science of Musculoskeletal Injury

Presented by William Marras, PhD, CPE

The science of occupational musculoskeletal injury is a largely misunderstood problem in the US and globally. This presentation explores the science of occupational injury as evidenced by the research, with the goal of seeking new ways to address worker injury. Specific tasks that commonly occur in the everyday life of healthcare providers are examined along with an explanation of how spine forces initiate physiologic consequences when these loads are exceeded over time. In addition, this presentation will describe new research trends that will improve our understanding of musculoskeletal causal pathways. Learners will have a better understanding of the relationship between patient handling and worker injury.

Objectives. By the end of the presentation, attendees will be able to:

1. Describe the history of worker injury.
2. Understand the principles of compression load(s).
3. Explain the relationship between compression loads and the human body.

Dr William Marras is well known to the SPHM movement as the research he has pioneered in his labs has been the foundation for understanding the mechanisms of occupational injury associated with patient and resident handling tasks. Among his professional accomplishments, Dr Marras is the Executive Director and Scientific Director of the Spine Research Institute, Professor of Physical Medicine & Rehabilitation, Professor of Department of Orthopaedic Surgery, Professor of Neurological Surgery, and the Honda Chair Professor, Integrated Systems Engineering.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

- *17.4 Practice using the principles of risk Management*
- *19.1 Provide culturally competent physical therapy services for prevention, health promotion, fitness, and wellness to individuals, groups, and communities*
- *19.3 Apply principles of prevention to defined population groups*

Relevance to Occupational Therapy

- *Domain 2, Task 03 Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*
- *Domain 4, Task 02 Incorporate risk management techniques at an individual and servicesetting level to protect clients, self, staff, and others from injury or harm during interventions.*

The biomechanical evidence for acute and chronic musculoskeletal injuries related to manual handling of patients is very strong. Dr Marras presents seminal work in this area. As experts in musculoskeletal injury prevention and treatment, physical therapists and occupational

therapists need to be integral members of SPHM teams, and be able to cite the evidence for safe patient handling programs.

Tuesday March 3, 2020 8:45 AM - 10:00 AM General Session

1002 Human Elements of Worker Injury

Presented by Raul Ayala, JD (Panel Moderator)

Many healthcare workers fail to understand the relationship between worker injury, standard treatment modalities and the ease at which dependency on opioids can occur. This presentation examines the threats of sustained emotional and physical stress on health and wellness. Occupational pain associated with drug tolerance, dependency, and addiction is described as are the real-life impact of these consequences. A case study is presented.

Objectives. By the end of the presentation, attendees will be able to:

1. Review the threat of sustained emotional and physical stress on health and wellbeing.
2. Explore causes of and treatment strategies for occupational injury.
3. Assess the real-life consequences of addiction.

Raul Ayala, Esq. is a Collaborative Courts Supervising Attorney assigned to the treatment courts in the Central District of California. As such, he has assisted in the selection, screening and assessment, and program planning for all participants with substance use and mental health issues. Raul is also active in the recovery community for legal professionals with the American Bar Association and the Hispanic National Bar Association.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

Prevention, Health Promotion, Fitness, and Wellness.

- *19.1 Provide culturally competent physical therapy services for prevention, health promotion, fitness, and wellness to individuals, groups, and communities*
- *19.2 Promote health and quality of life by providing information on health promotion, fitness, wellness, disease, impairment, functional limitation, disability, and health risks related to age, gender, culture, and lifestyle within the scope of physical therapy practice*
- *19.3 Apply principles of prevention to defined population groups*

Additionally, physical therapists are increasingly involved in pain management and strategies to prevent chronic pain and opioid use. Healthcare workers often suffer chronic debilitating pain from musculoskeletal injuries, and physical therapists should be actively involved in helping to prevent these injuries in healthcare workers.

Relevance to Occupational Therapy

- *Domain 1, Task 02 Acquire information specific to a client's functional skills, roles, culture, performance context, and prioritized needs through the use of standardized and*

non-standardized assessments and other available resources in order to develop and update the occupational profile.

- *Domain 2, Task 03 Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*

Tuesday March 3, 2020 11:30 AM - 11:15 AM General Session

1003 Occupational Health and Safety in 2020: Enforcement, Outreach, and Consultation Presented by Grace Delizo, CIH

This presentation will explore OSHA enforcement, outreach and consultative services.

Partnering with OSHA can prevent the need for enforcement actions through their outreach programs. Registered Nurses, Therapists, Engineers, Hospital Leaders, and Healthcare Planners alike will benefit from this engaging 360° view

Objectives. By the end of the presentation, attendees will be able to:

1. Understand OSHA mandates for SPHM.
2. Learn how to access OSHA for consultation.
3. Develop an action plan for partnering with OSHA.

Grace Delizo is a certified industrial hygienist and senior safety engineer for Cal/OSHA's Research and Standards Health Unit. Ms. Delizo participated in the division's working group implementation of AB 1136, the Hospital Patient and Health Care Worker Injury Protection Act, which included developing the new Title 8, Section 5120.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

- *Professional Practice - Adhere to legal practice standards, including all federal, state, and institutional regulations related to patient/client care.*
- *16.4 Plan of Care - Deliver and manage a plan of care that is consistent with legal, ethical and professional obligations and administrative policies and procedures of the practice environment.*

Relevance to Occupational Therapy

- *Principle 4 of Code of Professional Conduct: Certificants shall comply with state and/or federal laws, regulations, and statutes governing the practice of occupational therapy.*
- *Principle 6 of Code of Professional Conduct: Certificants shall not engage in behavior or conduct, lawful or otherwise that causes them to be, or reasonably perceived to be, a threat or potential threat to the health, well-being, or safety of recipients or potential recipients of occupational therapy services.*
- *Domain 4, Task 03 Manage occupational therapy service provision in accordance with laws, regulations, state occupational therapy practice acts, and accreditation guidelines*

in order to protect consumers and meet applicable reimbursement requirements in relation to the service delivery setting.

Physical therapists and occupational therapists practicing in states with SPHM legislation must be aware of the regulations and have a responsibility to practice according to their state and facility policies and procedures. These include SPHM principles.

Tuesday March 3, 2020 11:15 AM - 12:00 PM General Session

**1004 ANA's Safe Patient Handling and Mobility Interprofessional National Standards
Presented by Ruth Francis, MPH, MCHES**

The Standards are considered the foundation for national and state legislation, and a framework for programmatic implementation across the states and globally. Originally made available to the public in 2013, the ANA workgroup members and advisory groups are finalizing an updated revision. The process of revision is discussed and plans for distributing the all-new information are outlined.

Objectives. By the end of the presentation, attendees will be able to:

1. Review the history of the 2013 ANA SPHM National Standards.
2. Consider uses of the ANA SPHM Standards and the IG.
3. Explore the revised Standards.

Ruth Francis has over 25 years of international, corporate, association, government and community health education and promotion experience and works for the American Nurses Association (ANA) where she is a Senior Policy Advisor in the Nursing Practice & Work Environment Department. Ruth currently leads ANA's Occupational Health Initiatives - Safe Patient Handling and Mobility, #End Nurse Abuse and Bullying Prevention, Opioids Prevention, and Gun Violence Prevention, representing ANA at national and federal stakeholder meetings. Ms. Francis has authored or co-authored over 50 articles and has presented locally, nationally and internationally on occupational health, immunizations, and health and wellness promotion. She is leading the team that is re-writing the ANA Safe Patient Handling and Mobility Interprofessional National Standards that will be available in June 2020.

Ms. Francis received her master's degree from Loma Linda University in California and is certified as a Master Health Education Specialist. She is currently working pursuing her Doctor of Public Health degree.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

- *Professional Practice - Adhere to legal practice standards, including all federal, state, and institutional regulations related to patient/client care*
- *16.4 Plan of Care - Deliver and manage a plan of care that is consistent with legal, ethical and professional obligations and administrative policies and procedures of the practice environment*

- 17.4 Practice using the principles of risk Management

Relevance to Occupational Therapy

- *Domain 4, Task 02 Incorporate risk management techniques at an individual and servicesetting level to protect clients, self, staff, and others from injury or harm during interventions.*
- *Principle 4 of Code of Professional Conduct: Certificants shall comply with state and/or federal laws, regulations, and statutes governing the practice of occupational therapy.*
- *Principle 6 of Code of Professional Conduct: Certificants shall not engage in behavior or conduct, lawful or otherwise that causes them to be, or reasonably perceived to be, a threat or potential threat to the health, well-being, or safety of recipients or potential recipients of occupational therapy services.*
- *Domain 4, Task 03 Manage occupational therapy service provision in accordance with laws, regulations, state occupational therapy practice acts, and accreditation guidelines in order to protect consumers and meet applicable reimbursement requirements in relation to the service delivery setting.*

Physical Therapists and Occupational Therapists are integral members of the care team for patient recovery, and are often injured during manual handling and assisting patients to move. SPHM standards affect how therapists work with their patients and they need to be aware of changes.

Tuesday March 3, 2020 1:00 PM - 1:45 PM General Session

1005 The Importance of Live Hands-On Demonstrations in Training

Presented by Rhonda Turner, MSN-LD, RN, CSPHA and Ronnie Turner, CNA, CSPHA

This presentation examines gaps in practice resulting from insufficient training methods, emphasizing the need for live hands-on training for patient handling and mobility. The availability of technology and the high cost of training have the potential to influence facilities to forego live hands-on training in favor of video or algorithm-based training tools. Rhonda explores the effect this can have on proficiencies, and by extension, the safety of patients and care staff alike.

Objectives. By the end of the presentation, attendees will be able to:

1. Identify the need for live ongoing SPHM learning.
2. Outline elements of a conversation supporting SPHM competence.
3. Describe a best-practice strategy for SPHM learning.

Rhonda has been in healthcare for 34 years in various roles. She acquired her BSN in 2014 and was inspired to go after her MSN-Leadership to be a stronger voice for the frontline, graduating in 2018 with a graduate certificate in healthcare education. She currently works as a RN Operations Support Specialist and her primary role includes onboarding, education, quality metrics, strategic initiatives and leadership. She continues to support her fellow nurses by

identifying methods to increase awareness around SPHM and demonstrate how a comprehensive program can positively impact patient outcomes while reducing injuries to the patients and frontline staff.

Ronnie has been in healthcare for 29 years and currently works on the Critical Care Service Line at Northern Colorado Medical Center as CNA. SPHM is his passion and it shows in his daily routine with his engagement with his peers and his patients. He has always been a voice and role model for injury prevention throughout his career. He has been in instructor for 8 years and his peers look to him for SPHM solutions and as an inspiration.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations and Curriculum Content for CAPTE Criteria

- *P32 5.5 - Participate in efforts that support the role of the PT to further the health and well-being of the public*

Relevance to Occupational Therapy

- *B.1.3. Accreditation Council for Occupational Therapy Education (ACOTE®) - Demonstrate knowledge of the social determinants of health for persons, groups, and populations with or at risk for disabilities and chronic health conditions. This must include an analysis of the epidemiological factors that impact the public health and welfare of populations.*

Physical therapists and occupational therapists are key educators for movement of patients. It is imperative that they help teach correct and appropriate ways to use equipment to mobilize patients in ways that are safe for the patients as well as for the caregivers. Ongoing education on a daily basis helps to consolidate learning in the classroom, and therapists must be part of the team to reinforce this.

Tuesday March 3, 2020 1:50 PM - 3:35 PM Hands-On Session

1006 “Hands-On”: Structured Case-Based Simulation Learning

Led by Tricia Jaworski, OTR/L, CSPHP and Teresa Boynton, MS, OTR, CSPHP

This presentation provides a mechanism for participants to use principles of simulation learning to match the patient(resident)/organizational need with human resources and SPHM technology (equipment, devices, training). This structured case-based simulation encourages critical thinking principles as a way to maximize available resources for purposes of improving patient safety and preventing worker injury.

Objectives. By the end of the presentation, attendees will be able to:

1. Describe the principles of simulation learning.
2. Identify SPHM challenges based on case scenarios.
3. Explore options to address the case scenarios.
4. Recognize the elements of critical thinking and decision making in SPHM case scenarios.

Tricia Jaworski, OTR/L, CSPHP is a System Safe Patient Handling Coordinator for the Advocate Aurora Health System in Wisconsin. She covers 14 Aurora Health Hospitals, Home Care, Hospice as well as 170 clinic locations. Tricia received her Bachelor of Science degree with a Major in Occupational Therapy, from Concordia University of Wisconsin. Tricia is a Registered Occupational Therapist and is certified by the National Board for Certification in Occupational Therapy. Tricia is a Certified Safe Patient Handling Professional and is currently serving on the Board of Directors for the ASPHP. Tricia has worked in a variety of treatment settings including inpatient, outpatient, ICU, work conditioning, birth to three and pediatrics. Currently her focus is Safe Patient Handling Mobility and Team Member safety.

Teresa Boynton, MS, OTR, CSPHP is currently an independent Safe Patient Handling Mobility (SPHM) and Bedside Mobility Assessment Tool (BMAT) consultant. She previously worked for Hill-Rom as a Clinical Consultant assisting healthcare facilities across the U.S. to build and sustain SPHM programs with a focus on improving patient outcomes while increasing caregiver safety using a standardized assessment linked to SPHM interventions. Prior to this, she worked for Banner Health for over 26 years. In 2001, she became the Banner Health “Ergonomics and Injury Prevention Specialist.” In 2003 with the goal of establishing SPHM programs system-wide, she began work on what became the Banner “Bedside Mobility Assessment Tool (BMAT) – a validated nurse-driven tool for assessing current mobility status based on objective findings. From 2011 through 2015, she led the Banner Health combined “Safe Patient Handling and Falls Prevention Team.” Other projects include using the HFMEA model to develop algorithms, a standardized care path, and appropriate equipment bundle for patients-of-size; standardizing workers’ compensation injury coding, tracking and trending for effective injury prevention action planning; reviewing FDA medical device adverse events reports related to sling and lift safety issues, and participating with a team that wrote the “Healthcare Recipient Sling and Lift Hanger Bar Compatibility Guidelines.” Teresa is certified by the Association of Safe Patient Handling Professionals (ASPHP).

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

Clinical Reasoning

- *8.1 Use Clinical Judgment and reflection to identify, monitor, and enhance clinical reasoning to minimize errors and enhance patient/client outcomes*
- *8.2 Consistently apply current knowledge, theory and professional judgment while considering the patient/client perspective in patient/client management*
- *16.2 Establish a physical therapy plan of care that is SAFE, Effective, and patient/client centered*
- *16.4 Deliver and manage a plan of care that is consistent with legal, ethical and professional obligations and administrative policies and procedures of the practice environment*
- *17.1 Provide physical therapy interventions to achieve patient/client goals and outcomes.*
- *17.4 Practice using the principles of risk Management*

Relevance to Occupational Therapy

- *B.3.7. Accreditation Council for Occupational Therapy Education (ACOTE®)- Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice. This must include the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status, and temperature) to ensure that the client is stable for intervention.*
- *Domain 2, Task 03 - Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*
- *Domain 4, Task 02 Incorporate risk management techniques at an individual and servicesetting level to protect clients, self, staff, and others from injury or harm during interventions.*

This case based learning session allows therapists to get hands-on experience with equipment, and to use critical thinking skills to identify how they will apply safety principles to their own practice and in their own therapeutic treatment interventions.

Tuesday March 3, 2020 3:40 PM - 4:55 PM Panel Discussion

1007 Safe Patient Handling at Stanford Health Care – Building Accountability, New Practices, Expanding Services to Ambulatory Settings

Presented by Joseph Daly, PT, MBA, MHA, FACHE, Ed Hall, MS, CSP, CSPHP and ASPHP Incoming President and Michele Blazek, MBA

This course deconstructs the Case Study at Stanford Health Care and highlights Stanford Health Care's Safe Patient Handling (SPH) Program. As a relatively mature program that has recently moved to new 360-bed, state-of-the-art hospital with overhead lifts in every room while continuing operations in an existing building using portable lifts, new processes/workflows have been developed while simultaneously refining existing ones.

Areas of focus include

- Injury tracking, accountability, and follow up
- Increased engagement through the targeted use of front-line SPH Champions for both hospital and multiple ambulatory sites.
- Training strategies discussed: upgrade of Learning Management System (LMS) content and hands-on training to efficiently deliver the most relevant knowledge and skills to a greater number of clinical/ancillary staff with increased focus on ergonomics; interdisciplinary design of hands-on overhead lift training using a scenario-based learning approach that incorporates Bedside Mobility Assessment Tool (BMAT) assessment and appropriate equipment use.

- Improved accountability through the use of tools to support supervisor rounding on Safe Patient Handling techniques will also be discussed.

Objectives. By the end of the presentation, attendees will be able to:

1. Compare an existing facility SPHM process with a new facility SPHM process.
2. Review SPHM training strategies and delivery.
3. Assess opportunities to improve accountability.

Joseph Daly - With more than twenty years of progressive clinical experience, management responsibility and leadership development across acute and post-acute settings including home health, long term care, outpatient, rehabilitation and inpatient hospital environments, Joseph Daly has extensive experience developing innovative care delivery approaches to support efficient transition across the continuum, emphasizing high quality/low cost care, optimal outcomes, regulatory compliance, and reducing readmission.

J. Daly is experienced in managing and integrating acute, post-acute and ancillary services across the healthcare system. J. Daly is skilled at analyzing utilization patterns to develop optimal treatment algorithms and decision support tools, enhancing ambulatory programs to improve access, and developing fully aligned inpatient/ambulatory care programming to improve care delivery and meet shifting market needs.

For the past three years, J. Daly has led Stanford Health Care's Safe Patient Handling Committee.

Joseph Daly holds a B.S. in Physical Therapy from Temple University and an M.B.A from University of Pittsburgh, Katz Graduate School of Business.

Ed Hall - With over 20 years of diverse risk and insurance management experience, Ed Hall is an authority in managing risks in healthcare and industrial sectors. He is nationally recognized for his development of innovative loss control risk management programs, which have led to dramatic increases in both patient safety and financial savings.

Additionally, Ed Hall knowledge and leadership helped Stanford Hospital and Clinics receive the "Best Practice Award" for safe patient handling – one of the Risk Authority's Stanford's key strategic patient and employee initiatives.

E. Hall received a B.S. in Fire and Safety Engineering and an MS in Loss Prevention and Safety from Eastern Kentucky University and is also a Certified Safety Professional (CSP). E. Hall also received a certificate in Strategic Decision and Risk Management from Stanford University's Center for Professional Development.

Michele Blazek - With over 30 years of experience in telecommunications, healthcare and consulting, M. Blazek has led multidisciplinary teams to improve the performance of

compliance management systems and to integrate EH&S and sustainability into business operations.

M. Blazek chairs SHC Environment of Care/Life Safety Steering Committee and the SHC Employee Safety Council.

M. Blazek holds a B.S. in Civil and Environmental Engineering/ Engineering and Public Policy from Carnegie Mellon University in Pittsburgh, PA and an M.B.A from JWMI - Strayer University. M. Blazek currently serves on the Dean's Alumni Advisory Council for the Carnegie Mellon School of Engineering.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

- *17.4 Practice using the principles of risk Management*
- *Prevention, Health Promotion, Fitness, and Wellness.*
- *19.1 Provide culturally competent physical therapy services for prevention, health promotion, fitness, and wellness to individuals, groups, and communities*
- *19.2 Promote health and quality of life by providing information on health promotion, fitness, wellness, disease, impairment, functional limitation, disability, and health risks related to age, gender, culture, and lifestyle within the scope of physical therapy practice*
- *19.3 Apply principles of prevention to defined population groups*
- *Physical Therapists are often assigned the role of SPHM specialist or coordinator in their facility, and this session provides best practices for them to perform this role effectively. The role itself aligns with the therapist role in injury prevention and risk management.*

Relevance to Occupational Therapy

- *Domain 2, Task 03 - Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*
- *Domain 4, Task 02 Incorporate risk management techniques at an individual and servicesetting level to protect clients, self, staff, and others from injury or harm during interventions.*

Physical Therapists and Occupational Therapists are often assigned the role of SPHM specialist or coordinator in their facility, and this session provides best practices for them to perform this role effectively. The role itself aligns with the therapist role in injury prevention and risk management.

Wednesday March 4, 2020 8:00 AM - 9:00 AM Keynote

2001 Research: A Look to the Future

Presented by Neal Wiggermann, Lisa Annemarie Pompeii, PhD, MS, RN, FAOHN and Rhonda Turner, MSN-LD, CSPHA

This presentation explores the many faces of SPHM research, which includes research in a clinical laboratory, academic research in a university setting, and grass-roots research that begins at the bedside. A case study approach is presented.

Objectives. By the end of the presentation, attendees will be able to:

1. Identify SPHM research opportunities occurring in the laboratory setting.
2. Consider academic research opportunities for SPHM.
3. Evaluate hospital-based research SPHM initiatives.

Neal Wiggermann is a Specialist Research Scientist in Human Factors and Ergonomics at Hill-Rom. He manages a biomechanics laboratory and performs scientific research and product testing to inform the design of medical devices to reduce caregiver injuries and improve outcomes for patients. Neal has published research that spans the topics of occupational biomechanics, safe patient handling, and patient safety.

Lisa Pompeii is an occupational health nurse and occupational epidemiologist with a research focus in work related injuries and illnesses specific to healthcare workers, including back injuries and work disability due to patient handling. Dr. Pompeii currently leads two NIOSH funded studies focusing on workplace violence in outpatient physician clinics, as well as respiratory protection strategies in healthcare. Lisa is co-director for the Center for Epidemiology & Population Health at Texas Children's Hospital, as well as the editor in chief for Workplace Health & Safety, which is the society journal for AAOHN.

Rhonda Turner has been in healthcare for 34 years in various roles. She acquired her BSN in 2014 and was inspired to go after her MSN-Leadership to be a stronger voice for the frontline, graduating in 2018 with a graduate certificate in healthcare education. She currently works as a RN Operations Support Specialist and her primary role includes onboarding, education, quality metrics, strategic initiatives and leadership. She continues to support her fellow nurses by identifying methods to increase awareness around SPHM and demonstrate how a comprehensive program can positively impact patient outcomes while reducing injuries to the patients and frontline staff.

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

- *9.3 Consistently integrate the best evidence for practice from sources of information and clinical judgment and patient/client values to determine best care for a patient/client*

Relevance to Occupational Therapy

- *Preamble. Accreditation Council for Occupational Therapy Education (ACOTE®) - Be prepared to articulate and apply occupational therapy theory through evidence-based evaluations and interventions to achieve expected outcomes as related to occupation.*
- *Domain 2, Task 02- Collaborate with the client, the client's relevant others, occupational therapy colleagues, and other professionals and staff by using a culturally sensitive, client-centered approach and therapeutic use of self to manage occupational therapy services guided by evidence and principles of best practice.*

Therapists are encouraged to participate in clinical research and should always practice according to current evidence. This includes evidence on the impact of safe patient handling and mobility on caregiver as well as patient outcomes.

Wednesday March 4, 2020 2:55 PM - 4:40 PM Repeat Hands-On Session

2007 “Hands-On”: Structured Case-Based Simulation Learning

Led by Tricia Jaworski, OTR/L, CSPHP and Teresa Boynton, MS, OTR, CSPHP

This presentation provides a mechanism for participants to use principles of simulation learning to match the patient(resident)/organizational need with human resources and SPHM technology (equipment, devices, training). This structured case-based simulation encourages critical thinking principles as a way to maximize available resources for purposes of improving patient safety and preventing worker injury.

Objectives. By the end of the presentation, attendees will be able to:

1. Describe the principles of simulation learning.
2. Identify SPHM challenges based on case scenarios.
3. Explore options to address the case scenarios.
4. Recognize the elements of critical thinking and decision making in SPHM case scenarios.

Tricia Jaworski, OTR/L, CSPHP is a System Safe Patient Handling Coordinator for the Advocate Aurora Health System in Wisconsin. She covers 14 Aurora Health Hospitals, Home Care, Hospice as well as 170 clinic locations. Tricia received her Bachelor of Science degree with a Major in Occupational Therapy, from Concordia University of Wisconsin. Tricia is a Registered Occupational Therapist and is certified by the National Board for Certification in Occupational Therapy. Tricia is a Certified Safe Patient Handling Professional and is currently serving on the Board of Directors for the ASPHP. Tricia has worked in a variety of treatment settings including inpatient, outpatient, ICU, work conditioning, birth to three and pediatrics. Currently her focus is Safe Patient Handling Mobility and Team Member safety.

Teresa Boynton, MS, OTR, CSPHP is currently an independent Safe Patient Handling Mobility (SPHM) and Bedside Mobility Assessment Tool (BMAT) consultant. She previously worked for Hill-Rom as a Clinical Consultant assisting healthcare facilities across the U.S. to build and sustain SPHM programs with a focus on improving patient outcomes while increasing caregiver safety using a standardized assessment linked to SPHM interventions. Prior to this, she worked for Banner Health for over 26 years. In 2001, she became the Banner Health “Ergonomics and Injury Prevention Specialist.” In 2003 with the goal of establishing SPHM programs system-wide, she began work on what became the Banner “Bedside Mobility Assessment Tool (BMAT) – a validated nurse-driven tool for assessing current mobility status based on objective findings. From 2011 through 2015, she led the Banner Health combined “Safe Patient Handling and Falls Prevention Team.” Other projects include using the HFMEA model to develop algorithms, a

standardized care path, and appropriate equipment bundle for patients-of-size; standardizing workers' compensation injury coding, tracking and trending for effective injury prevention action planning; reviewing FDA medical device adverse events reports related to sling and lift safety issues, and participating with a team that wrote the "Healthcare Recipient Sling and Lift Hanger Bar Compatibility Guidelines." Teresa is certified by the Association of Safe Patient Handling Professionals (ASPHP).

Relevance to Physical Therapy and Normative Model Professional Practice Expectations

Clinical Reasoning

- *8.1 Use Clinical Judgment and reflection to identify, monitor, and enhance clinical reasoning to minimize errors and enhance patient/client outcomes*
- *8.2 Consistently apply current knowledge, theory and professional judgment while considering the patient/client perspective in patient/client management*
- *16.2 Establish a physical therapy plan of care that is SAFE, Effective, and patient/client centered*
- *16.4 Deliver and manage a plan of care that is consistent with legal, ethical and professional obligations and administrative policies and procedures of the practice environment*
- *17.1 Provide physical therapy interventions to achieve patient/client goals and outcomes.*
- *17.4 Practice using the principles of risk Management*

Relevance to Occupational Therapy

- *B.3.7. Accreditation Council for Occupational Therapy Education (ACOTE®)- Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice. This must include the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status, and temperature) to ensure that the client is stable for intervention.*
- *Domain 2, Task 03 - Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*
- *Domain 4, Task 02 Incorporate risk management techniques at an individual and servicesetting level to protect clients, self, staff, and others from injury or harm during interventions.*

This case based learning session allows therapists to get hands-on experience with equipment, and to use critical thinking skills to identify how they will apply safety principles to their own practice and in their own therapeutic treatment interventions.

Thursday March 5, 2020 8:15 AM - 9:00 AM **Keynote**

3001 Health Care Claims Database: Understanding National Employee Injury Trends

Presented by Vicki Missar

This presentation features a data measurement model used to process over 230,000 SPH claims from 66 healthcare systems. Further, evidence is presented that suggests that there is a direct correlation between adherence to the standards in SPHM programs ASPHP certification and reductions in the frequency and severity of care staff injury attributed to patient handling and mobility. Missar breaks down this connection on a national level, pointing to tangible results stemming from individual facilities' implementation of the ANA standards and ASPHP certification.

Objectives. By the end of the presentation, attendees will be able to:

1. Understand the implications of the ANA SPHM Standards.
2. Review Aon data comparing facilities utilizing the ANA Standards with facilities that are not utilizing them.
3. Learn the benefits of ANA Standards/CSPHP Certification as functions of buy-in (% of staff participating).

Vicki J. Missar is an Associate Director for Aon Global Risk Consulting in the US. She is a thought leader and oversees three casualty product lines including Ageonomics™, Health Care, and Musculoskeletal Claims Validation. As a Guest Lecturer for the Harvard School of Public Health, Vicki is viewed as an expert in developing solutions for employers around aging workers, integrated health, safety and wellbeing, and systems thinking. She is a six sigma black belt, has numerous certifications, and is on the board of directors for the Association of Safe Patient Handling and the North Texas Chapter of the Human Factors/Ergonomics Society. Vicki is also part of the American Nurses Association Annual Summit for Nursing Practice & Work Environment that is focusing on policy development for key issues facing nurses. Vicki works with a team of actuaries on a bi-annual Workers' Compensation Barometer report that analyzes over \$3.0 billion in losses for benchmarking programs.

Relevance to Rehab professionals and Normative Model Professional Practice Expectations

- *8.2 Consistently apply current knowledge, theory and professional judgment while considering the patient/client perspective in patient/client management*
- *17.4 Practice using the principles of risk Management*
- *19.1 Provide culturally competent physical therapy services for prevention, health promotion, fitness, and wellness to individuals, groups, and communities*
- *19.2 Promote health and quality of life by providing information on health promotion, fitness, wellness, disease, impairment, functional limitation, disability, and health risks related to age, gender, culture, and lifestyle within the scope of physical therapy practice*
- *19.3 Apply principles of prevention to defined population groups*

- *P32 5.5 - Participate in efforts that support the role of the PT to further the health and well-being of the public*

Relevance to Occupational Therapy

- *Domain 1, Task 02 Acquire information specific to a client's functional skills, roles, culture, performance context, and prioritized needs through the use of standardized and non-standardized assessments and other available resources in order to develop and update the occupational profile.*
- *Domain 2, Task 03 Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*
- *B.3.7. Accreditation Council for Occupational Therapy Education (ACOTE®)- Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice. This must include the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status, and temperature) to ensure that the client is stable for intervention.*
- *Principle 4 of Code of Professional Conduct: Certificants shall comply with state and/or federal laws, regulations, and statutes governing the practice of occupational therapy.*
- *Principle 6 of Code of Professional Conduct: Certificants shall not engage in behavior or conduct, lawful or otherwise that causes them to be, or reasonably perceived to be, a threat or potential threat to the health, well-being, or safety of recipients or potential recipients of occupational therapy services.*

This presentation will show the evidence that SPHM programs do impact caregiver safety, and that programs run by certified professional have demonstrated increased effectiveness than those run by uncertified professionals. Therapists are expected to practice all areas whether treatment or preventive health based on strong evidence. This session helps provide further evidence to support the importance of therapists' work in this area.

Thursday March 5, 2020 9:00 AM - 10:15 AM Panel Discussion

3002 Best Practice Across the Nation

Presented by Mary W. Matz, MSPH, CPE, CSPHP and James Collins, PhD, MSME

This inspiring presentation features voices of SPHM pioneers and leaders. Participants can expect to learn ways to identify opportunity and overcome barriers as SPHM continues to evolve. Learn about some of the latest initiatives from leading organizations in the US. This interactive presentation will allow participants to submit specific questions that need answers as we build a stronger unified message of universal SPHM.

Objectives. By the end of the presentation, attendees will be able to:

1. Learn of the latest opportunities in SPHM.
2. Recognize barriers in SPHM.

3. Explore the future of SPHM.

Mary Matz is internationally recognized for her work in patient care ergonomics. She developed, implemented, and sustained the national VA Safe Patient Handling and Mobility Program bringing it national and international recognition. Her expertise led to the incorporation of patient handling design criteria into national healthcare design guidelines and primary authorship of the *Patient Handling and Movement Assessments: A White Paper*.

James Collins is a national leader committed to addressing the two leading causes of occupational injury in healthcare workers: safe patient handling and mobility; and slip, trip, and fall prevention. His work has impacted healthcare worker safety globally and has led to a reduction in injury in various healthcare settings. Collins currently serves as the Associate Director for Science in the NIOSH Division of Safety Research (DSR). Incorporating research-to-practice methods into his research, has worked with opinion leaders to raise awareness of occupational risks and to promote the widespread implementation of effective solutions, both nationally and internationally.

Relevance to Rehab professionals and Normative Model Professional Practice Expectations

- *8.2 Consistently apply current knowledge, theory and professional judgment while considering the patient/client perspective in patient/client management*
- *19.2 Promote health and quality of life by providing information on health promotion, fitness, wellness, disease, impairment, functional limitation, disability, and health risks related to age, gender, culture, and lifestyle within the scope of physical therapy practice*

Relevance to Occupational Therapy

- *Preamble- Accreditation Council for Occupational Therapy Education (ACOTE®) - Be able to plan and apply evidence-based occupational therapy interventions to address the physical, cognitive, functional cognitive, psychosocial, sensory, and other aspects of performance in a variety of contexts and environments to support engagement in everyday life activities that affect health, well-being, and quality of life, as informed by the Occupational Therapy Practice Framework.*
- *Domain 2, Task 03 Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*

The panel discussion will allow therapists to ask questions and hear others' questions directed to a panel of industry experts. This can cover any aspect of SPHM program and address therapist concerns about treating their own patients and client management, or in their role as program managers for SPHM for injury prevention and wellness promotion.

Thursday March 5, 2020 10:45 AM - 11:15 AM General Session

3003 Sustainability: Lessons Learned

Presented by Andy Rich, MS, OTR/L, CSPHP

This presentation provides practical tips and ideas about sustaining a mature SPHM, focusing on what works and what doesn't work, as well as ideas for building elements that support long term sustainability into a new or evolving SPHM program. Long-term success begins in the beginning!

Objectives. By the end of the presentation, attendees will be able to:

1. Define sustainability.
2. Describe lessons learned that build sustainability into a new, evolving, or mature SPHM program.
3. Identify specific strategies that support SPHM programs over time.

Andy Rich presently works as the Clinical Manager for Arjo since 2004. In his role, he provides leadership in the design, delivery and consultation of effective safe patient handling and mobility programs, managing and leading consultant teams and serving as key opinion leader in the design of safe patient handling equipment. He has served on the executive board of the Association of Safe Patient Handling Professional from 2011-2013 and serves as mentor for individuals entering the field of healthcare. Prior to working at Arjo, Andy has worked as an occupational therapist providing rehabilitative services in acute & outpatient care settings and developing safety programs, return to duty work programs, managing an Industrial Rehabilitation Program. He holds certifications in Ergonomics, Process Improvement and Training and Development. He has presented as a keynote and plenary speaker numerous times from 2008-2019, Most recently he has spoken at the Patient Handling and Movement Conference in Florida; 2019 Connecticut Hospital Association Safe Patient Handling Conference; 2019 University of Alabama Safe Patient Handling Symposium; 2019 Mobility is Medicine Conferences, 2018 Association of Occupational Health Professionals and 2015 Stanford University EHSSentials Conference. Andy is currently in production of Early Mobility film that is hoping to be released in 2020. Andy has his Masters of Science in Occupational Therapy from Rush University in Chicago, IL

Relevance to Rehab professionals and Normative Model Professional Practice Expectations

- *1.1 Professional Practice - Adhere to legal practice standards, including all federal, state, and institutional regulations related to patient/client care.*
- *17.4 Practice using the principles of risk Management*
- *19.1 Provide culturally competent physical therapy services for prevention, health promotion, fitness, and wellness to individuals, groups, and communities*
- *19.2 Promote health and quality of life by providing information on health promotion, fitness, wellness, disease, impairment, functional limitation, disability, and health risks related to age, gender, culture, and lifestyle within the scope of physical therapy practice*
- *19.3 Apply principles of prevention to defined population groups*
- *P32 5.5 - Participate in efforts that support the role of the PT to further the health and well-being of the public*

Relevance to Occupational Therapy

- *Domain 1, Task 02 Acquire information specific to a client's functional skills, roles, culture, performance context, and prioritized needs through the use of standardized and non-standardized assessments and other available resources in order to develop and update the occupational profile.*
- *Domain 2, Task 03 Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*
- *B.3.7. Accreditation Council for Occupational Therapy Education (ACOTE®)- Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice. This must include the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status, and temperature) to ensure that the client is stable for intervention.*
- *Principle 4 of Code of Professional Conduct: Certificants shall comply with state and/or federal laws, regulations, and statutes governing the practice of occupational therapy.*
- *Principle 6 of Code of Professional Conduct: Certificants shall not engage in behavior or conduct, lawful or otherwise that causes them to be, or reasonably perceived to be, a threat or potential threat to the health, well-being, or safety of recipients or potential recipients of occupational therapy services.*

This session will give therapists real life strategies that have proven effectiveness for sustainability of their programs from out with the VHA. This is another opportunity to see what other programs have found to be effective in sustainable culture change.

Thursday March 5, 2020 11:15 - 12:00 PM Closing Keynote

3004 Now What: The Next 20 Years

Presented by Susan Gallagher, PhD, MA, MSN, RN, CSPHP, CBN

Twenty years ago, Audrey Nelson introduced Back Injury Prevention as a safety initiative. The term was quickly changed to SPH and Movement. In 2013, the term was changed again to SPHM. We know it takes about 20 years for a good idea to become practice. This presentation challenges participants to embrace this all-new way of providing safe, quality patient activity.

Objectives. By the end of the presentation, attendees will be able to:

1. Describe the history of SPHM.
2. Identify resources available in SPHM today.
3. Explore the SPHM vision for tomorrow.

Susan Gallagher earned a Masters' Degree in Nursing: Advanced Practice WOC Nursing from University of Southern California in 1995. She holds a Masters' Degree in Religion and Social Ethics, and a PhD in Policy Ethics from University of Southern California. Dr Gallagher is certified in Bariatric Nursing and is a Certified Safe Patient Handling Professional. She is currently President of the Association for Safe Patient Handling Professionals, Associate Editor for Workplace Health and Safety (AAOHN), has served on a number of international boards and is a recognized speaker on skin and wound care, outcomes, bariatrics, ethics, risk and loss control across the globe. Susan is the author of more than 200 peer-reviewed articles, books and book chapters, including the 2013 ANA Implementation Guide to SPHM Standards, Bariatric SPHM and more.

Relevance to Rehab professionals and Normative Model Professional Practice Expectations

- *1.1 Professional Practice - Adhere to legal practice standards, including all federal, state, and institutional regulations related to patient/client care.*
- *P32 5.5 - Participate in efforts that support the role of the PT to further the health and well-being of the public*

Relevance to Occupational Therapy

- *Preamble- Accreditation Council for Occupational Therapy Education (ACOTE®) - Be able to plan and apply evidence-based occupational therapy interventions to address the physical, cognitive, functional cognitive, psychosocial, sensory, and other aspects of performance in a variety of contexts and environments to support engagement in everyday life activities that affect health, well-being, and quality of life, as informed by the Occupational Therapy Practice Framework.*
- *Domain 2, Task 03 Manage the intervention plan by using clinical reasoning, therapeutic use of self, and cultural sensitivity to identify, monitor, and modify the intervention approach, context, or goals based on client needs, priorities, response to intervention, changes in condition, reevaluation results, and targeted outcomes.*

This final closing keynote will serve as a call to action for those professionals whose job includes safety, injury prevention and wellness promotion. This includes therapists in treatment of patients and client management, as well as those in leadership roles for SPHM program management. This session will encapsulate much of what has been said throughout the week with an overview of next steps and industry direction to help build momentum and encourage attendees to implement the new ideas, knowledge, techniques and strategies they have gained throughout the conference.

Bibliography

1. AOHHP Implementation Team. Beyond Getting Started: A Resource Guide for Implementing a Safe Patient Handling Program in the Acute Care Setting. Accessed October 15, 2019 at:

<https://www.aohp.org/aohp/TOOLSFORYOURWORK/PublicationsforYourPractice/BeyondGettingStarted.aspx>

2. AON, 2018. *Health Care Workers Compensation Barometer Actuarial Analysis*, November 2018. Accessed June 25, 2019. <https://www.aon.com/risk-services/thought-leadership/report-2018-health-care-barometer.jsp>
3. Ayala, R. (2018) Attorney "Well-being: HNBA as a catalyst for change." Accessed at: <https://blog.texasbar.com/2018/04/articles/tlap/attorney-well-being-hnba-as-a-catalyst-for-change/>
4. Black, J. M., Salsbury, S., & Vollman, K. M. (2018). Changing the perceptions of a culture of safety for the patient and the caregiver: integrating improvement initiatives to create sustainable Change. *Critical care nursing quarterly*, 41(3), 226-239.
5. Cantrell, M. A., Franklin, A., Leighton, K., & Carlson, A. (2017). The evidence in simulation-based learning experiences in nursing education and practice: An umbrella review. *Clinical simulation in nursing*, 13(12), 634-667.
6. Castro, I., & Ramos, D. G. (2017). Understanding the management of occupational health and safety risks through the consultation of workers. In *Occupational Safety and Hygiene V* (pp. 29-34). CRC Press.
7. Cortez, W., Gill, R., & Chun, G. (2017). Peer feedback drives improved injury rates. *Nursing Management*, 16-19.
8. Dennerlein, J. T., O'day, E. T., Mulloy, D. F., Somerville, J., Stoddard, A. M., Kenwood, C., & Hashimoto, D. (2017). Lifting and exertion injuries decrease after implementation of an integrated hospital-wide safe patient handling and mobilisation programme. *Occup Environ Med*, 74(5), 336-343.
9. Dennis, D., Furness, A., Duggan, R., & Critchett, S. (2017). An Interprofessional Simulation-Based Learning Activity for Nursing and Physiotherapy Students. *Clinical Simulation in Nursing*, 13(10), 501-510.
10. ED. (2016) Preventing handling injuries in nurses. Accessed October 22, 2019 at: <https://americannursetoday.com/wp-content/uploads/2016/05/Patient-Handling-Safety-426b.pdf>
11. Enos L, Francis R, Kumpar D. Enhancing nursing care and patient outcomes: The safe patient handling and mobility connection. *American Nurse Today*. 2019; 14(9):86-91.
12. Enos, L. (2018). The role of ceiling lifts in a safe patient handling and mobility program. *International Journal of Safe Patient Handling & Mobility*, 8(1), 25-45.
13. Enos, L. (2018). The role of ceiling lifts in a safe patient handling and mobility program. *International Journal of Safe Patient Handling & Mobility*, 8(1), 25-45. Retrieved from <http://sphmjournal.com/>
14. Feldman DE, Carlesso LC, Nahin RL. (2019) "Management of Patients with a Musculoskeletal Pain Condition that is Likely Chronic: Results from a National Cross Sectional Survey." *J Pain*. Accessed epub ahead of print at: <https://www.ncbi.nlm.nih.gov/pubmed/31837448>
15. Fragala, G., Boynton, T., & Conti, M. (2016). Patient-handling injuries: risk factors and risk-reduction strategies. *Am Nurse Today*, 11(5), 40-44.

16. Fray, M. and Holgate, G., 2018. A comparative force assessment of 4 methods to move a patient up a bed. In *Congress of the International Ergonomics Association* (pp. 631-640). Springer, Cham.
17. Gallagher SM. Dawson JM. (2016) Charting a path forward: results and recommendations from ANA's SPHM environmental scan. *American Nurse Today*. 11(3):18-19.
18. Garg, A. and W.S. Marras, (2014) Epidemiological issue of workplace musculoskeletal disorder. *Human Factors*, 56(1), 5.
19. Heath, C. & Heath, D. (2017). *The power of moments: Why certain experiences have extraordinary impact*. Simon & Schuster, New York, NY.
20. Henry D, Connolly G, Shields R. (2015) Simulation of Patient Handling Tasks Improves Safety. *Medical Training Magazine*. Accessed October 25, 2015 at: <https://medicalsimulation.training/nursing/simulation-of-patient-handling-tasks-improves-safety/>
21. Jacobs, R., Beyer, E., & Carter, K. (2017). Interprofessional simulation education designed to teach occupational therapy and nursing students' complex patient transfers. *Journal of Interprofessional Education & Practice*, 6, 67-70.
22. King B, Pecanac K; Krupp A; Liebzeit, D; Mahoney J. Impact of fall prevention on nurses and care of fall risk patients. *Gerontologist*. 2018; 58(2)331-340.
23. Klein, K. E., Bena, J. F., Mulkey, M., & Albert, N. M. (2018). Sustainability of a nurse-driven early progressive mobility protocol and patient clinical and psychological health outcomes in a neurological intensive care unit. *Intensive and Critical Care Nursing*, 45, 11-17.
24. Kucera, K., Schoenfisch, A., et al. (2019) Factors associated with lift equipment use during patient lifts & transfers by hospital nurses & nursing care assistants: A prospective observational cohort study. *International Journal of Nursing Studies* 91:35-46.
25. Kurowski, A., Gore, R., Roberts, Y., Kincaid, K. R., & Punnett, L. (2017). Injury rates before and after the implementation of a safe resident handling program in the long-term care sector. *Safety Science*, 92, 217-224.
26. Lai HS, Szeto GP, Chan CC. Injured workers' perception of loss and gain in the return to work process. *Risk Manag Healthc Policy*. 2017;10:7-16. Published 2017 Feb 7. doi:10.2147/RMHP.S119479
27. Lee, C., Knight, S. W., Smith, S. L., Nagle, D. J., & DeVries, L. (2018). Safe Patient Handling and Mobility: Development and Implementation of a Large-Scale Education Program. *Critical care nursing quarterly*, 41(3), 253-263.
28. Malet, D., Falzon, P., & Vidal-Gomel, C. (2019, July). Developing Patient Handling Competences Through Participatory Design of Simulation Scenarios. In *International Conference on Healthcare Ergonomics and Patient Safety* (pp. 357-364). Springer, Cham.
29. Marras. W.S., Ferguson, S.A., Lavender, S.A. Splittstoesser, R.E., and G. Yang (2014) Cumulative spine loading and clinically meaningful declines in low back function. *Human Factors*, 56(1), 29-43.
30. Marzinsky A, Smith-Miller CA. Nurse research and the institutional review board. *American Nurse Today*. 2019;14(10):20 – 24. Wiggermann, N., Zhou, J., McGann, N.

2019. Effect of Repositioning Aids and Patient Weight on Biomechanical Stresses when Repositioning Patients in Bed. *Human Factors*. [Under Review]
31. McCaughey, D., Kimmel, A., Savage, G., Lukas, T., Walsh, E., & Halbesleben, J. (2016). Antecedents to workplace injury in the healthcare industry: A synthesis of the literature. *Health Care Management Review*, 41(1), 42-55.
 32. Minnick, W. D., Helmrich-Rhodes, L., Mulroy, J., & McKnight, D. (2019). OSHA Consultation: How to Get Started. *Professional Safety*, 64(06), 46-50.
 33. Missar VJ, Fray M, Matz M, Raphan C, Weaver W. Safe Patient Handling and Mobility Claims Coding: A Pragmatic and Functional Approach. Accessed January 9, 2020 at: <https://asphp.org/wp-content/uploads/2011/05/Safe-Patient-Handling-and-Mobility-Claims-Coding-A-Pragmatic-and-Functional-Approach-V18-7.pdf>
 34. MN Department of Labor and Industry. Safe Patient Handling and Mobility. Accessed October 25, 2019 at: <https://www.dli.mn.gov/business/workplace-safety-and-health/mnosha-wsc-safe-patient-handling>
 35. Olinski, C., & Norton, C. E. (2017). Implementation of a safe patient handling program in a multihospital health system from inception to sustainability: Successes over 8 years and ongoing challenges. *Workplace health & safety*, 65(11), 546-559.
 36. Poole Wilson, T., Davis, K.G., Kotowski, S.E. and Daraiseh, N., 2015. Quantification of patient and equipment handling for nurses through direct observation and subjective perceptions. *Advances in Nursing*, 2015.
 37. Shin S, Park JH, Kim JH. (2015) Effectiveness of patient simulation in nursing education: meta-analysis. *Nurse Educ Today*. 35(1):176-82.
 38. Teeple, E., Collins, J. E., Shrestha, S., Dennerlein, J. T., Losina, E., & Katz, J. N. (2017). Outcomes of safe patient handling and mobilization programs: A meta-analysis. *Work*, 58(2), 173-184
 39. United States Department of Labor (2018). Benefits of the OSHA On-Site Consultation Program An Economic Analysis. Retrieved from https://www.osha.gov/sites/default/files/2018_Benefits_OSHA_On-Site_Consultation_Program_Economic_Analysis.pdf
 40. United States Department of Labor. Organizational Safety Culture - Linking patient and worker safety. Accessed October 15, 2019 at: https://www.osha.gov/SLTC/healthcarefacilities/safetyculture_full.html
 41. United States Department of Labor. The OSHA Consultation Program. Accessed October 15, 2019 at: https://www.osha.gov/OshDoc/data_General_Facts/factsheet-consultations.pdf
 42. US Department of Labor. Safe Patient Handling. Accessed January 9, 2020 at: <https://www.osha.gov/SLTC/healthcarefacilities/safepatienthandling.html>
 43. Wiggermann N, Smith K, Kumpar D. What bed size does a patient need? The relationship between Body Mass Index and space required to turn in bed. *Nursing Research*. 2017; 66(6):483–489.
 44. Wroblewski MT. (2019) What are the Benefits of Hands-on Training. USA Today Network. Accessed October 25, 2019 at: <https://yourbusiness.azcentral.com/benefits-handson-training-1121.html>

45. Zhou, J., Wiggermann, N. 2019. Physical Stresses on Caregivers when Pulling Patients Up in Bed: Effect of Repositioning Aids and Patient Weight. Human Factors and Ergonomics Society Conference.