

## Safe Patient Handling and Mobility (SPHM) - Resources

### Selected references – listed by topic and title

Provided by  
Lynda Enos, RN, BSN, MS, COHN-S, CPE  
Ergonomist/Human Factors Specialist,  
HumanFit, LLC., [www.humanfit@aol.com](mailto:www.humanfit@aol.com)

*Note that some SPHM related subjects may be listed in multiple topical sections of this document.*

### Contents

SPHM – General Resources .....	1
Videos and other on-line training - freely available .....	2
Journals.....	2
Books/Toolkits – SPHM, Ergonomics/Human Factors and Related .....	3
Other .....	4
Culture .....	4
Associations .....	6
Misc.....	6
SPHM and Covid-19 .....	7
SPHM Equipment and Design .....	8
Purchasing, Design, Installation Related .....	8
Regulatory Related to Patient Lifts .....	9
Ergonomics, Safety and Effectiveness of Using SPHM Equipment.....	10
Ceiling and Floor Lifts .....	10
Friction Reducing Devices.....	12
Stand Assist Systems .....	12
Slings.....	12
Misc.....	13
Leaving Slings and Air Assist Devices Under Patients.....	13
SPHM Program Outcomes .....	14
SPHM & Workplace Violence .....	18
Bariatrics & SPHM.....	18
SPHM Long-Term Care .....	20
SPHM Home Health .....	22
SPHM and Patient Safety General Information.....	23
Missed Nursing Care .....	24
SPHM - Mobility Assessment .....	26
Early Mobilization .....	28
Making the Business Case/Cost Benefit Related Articles/Injury Rates .....	30
SPHM Education & Training in Healthcare Organizations .....	31

*Note: References are listed by title and are not in any formal format i.e. APA*

## **SPHM – General Resources**

### **Videos and other on-line training - freely available**

Applied Ergonomics for Nurses and Health Care Workers. Training video. Oregon OSHA, 2004.

<https://www.youtube.com/watch?v=Vy8T8BUAbE4&feature=youtu.be>

Applied Ergonomics for Nurses and Health Care Workers - A Guide for Instructors. Oregon OSHA, 2004.

<https://osha.oregon.gov/edu/grants/train/Documents/instructor-guide-safe-patient-handling-in-health-care.pdf>

Association for Safe Patient Handling Professionals (ASPHP). <https://asphp.org/> Offer several free SPHM related webinars every year.

The Caretake Crisis. Investigating Work Related Injuries in Healthcare. Video. WA State Department of Labor & Industries, 2015.

<https://lni.wa.gov/safety-health/safety-research/completed-projects/safe-patient-handling>

Consequences of Manual Handling For Patients Webinar link <http://www.iinet2.org/details.aspx?id=39509>

Ergonomics in Healthcare: A Continuing Education Program for Nurses, Nursing Assistants and Healthcare Managers, U

Mas – Lowell, 2018. [www.uml.edu/Research/CPH-NEW/nurse-education/ergonomics/](http://www.uml.edu/Research/CPH-NEW/nurse-education/ergonomics/)

Injured Nurses. The National Public Radio Special Series, 2015. <http://www.npr.org/series/385540559/injured-nurses>

Part 2 provides information about the science that supports why patients cannot be lifted and moved manually and the true impact of patient handling related injuries on nurses and their families. For more about why patient handling is so dangerous... listen/read Dr. William Marras interview #2 in the series.

<http://www.npr.org/series/385540559/injured-nurses>

Quick Tips for Safe Patient Handling and Mobility. American Industrial Hygiene Association (AIHA) and The Occupational Safety and Health Administration (OSHA), 2014.

*English*

[https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/OSHA-Quick-Tips-on-SPHM\\_Final-Mar2014.pdf](https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/OSHA-Quick-Tips-on-SPHM_Final-Mar2014.pdf)

*Spanish*

[https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Quick-Tips-on-SPHM-Spanish-OSHA-review-6-27-14\\_FINAL.pdf](https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Quick-Tips-on-SPHM-Spanish-OSHA-review-6-27-14_FINAL.pdf)

Safe Patient Handling Nursing School Curriculum Module. National Institute for Occupational Safety and Health (NIOSH), 2009. <http://www.cdc.gov/niosh/docs/2009-127/>

The Caretake Crisis. Investigating Work Related Injuries in Healthcare. Video. WA State Department of Labor & Industries, 2015.

<https://lni.wa.gov/safety-health/safety-research/completed-projects/safe-patient-handling>

Time for Safe Patient Handling and Mobility. Training video. Washington State Hospital Association, 2015.

<https://vimeo.com/132744617>

Training Curriculum for Homecare Workers. Caring for Yourself While Caring for Others DHHS (NIOSH) Publication Number 2015-102. National Institute for Occupational Safety and Health (NIOSH), 2015.

<https://www.cdc.gov/niosh/docs/2015-102/default.html>

### **Journals**

The International Journal of Safe Patient Handling and Mobility. Visioning Publishing, FL. <https://sphmjournal.com/>

*Note: Not all articles published in this journal are included in the Resource list. Please review the journal contents for additional resources*

**Books/Toolkits – SPHM, Ergonomics/Human Factors and Related**

American Nurses Association Inter-Professional Standards for Safe Patient Handling and Mobility.(2013). (2<sup>nd</sup> edition coming in 2021) <https://www.nursingworld.org/nurses-books/safe-patient-handling-and-mobility-inter-professional-national-standards-ac/>

ACC6075 Moving and Handling People Guidelines 2012 Accident Compensation Corporation New Zealand. <https://www.acc.co.nz/assets/provider/acc6075-moving-and-handling-people-guidelines.pdf>

Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Hughes, Ronda G. (Ed) (2008). Rockville, MD: Agency for Healthcare Research and Quality. <http://www.ahrq.gov/professionals/clinicians-providers/resources/nursing/resources/nursesfdbk/index.html>

The Design of Every Day Things. 3<sup>rd</sup> Edition. (2013). Norman D. Currency Doubleday.

Ergonomic Design for People at Work. 2nd edition (2004). Eastman Kodak. John Wiley & Sons, Inc.

Guideline for Safe Patient Handling and Movement. In Guidelines for Perioperative Practice. Denver, CO: AORN, Inc; 2021. (For purchase) <https://aornguidelines.org/guidelines/content?sectionid=192587418&view=book>

AORN Guideline for Safe Patient Handling: Evidence Table. [https://www.aorn.org/-/media/aorn/guidelines/evidence-rating-and-tables/sphm\\_evidence\\_table.pdf?la=en&hash=65CD0922A47F76C1A7AD9AFED04C9616](https://www.aorn.org/-/media/aorn/guidelines/evidence-rating-and-tables/sphm_evidence_table.pdf?la=en&hash=65CD0922A47F76C1A7AD9AFED04C9616)

Handbook of Human Factors and Ergonomics in Health Care and Patient Safety (2012). Edited by Pascale Carayon. Lawrence Erlbaum Associate

Handle With Care®. *Website with Multiple Resources*. American Nurses Association (ANA). <https://www.nursingworld.org/practice-policy/work-environment/health-safety/handle-with-care>

Implementation Guide to the Safe Patient Handling and Mobility Interprofessional National Standards. Gallagher, S. (2013). American Nurses Association.

Improving Patient and Worker Safety: Opportunities for Synergy, Collaboration and Innovation. The Joint Commission 2012. <https://www.jointcommission.org/-/media/tjc/documents/resources/patient-safety-topics/patient-safety/tjc-improvingpatientandworkersafety-monograph.pdf>

International Organization for Standardization. ISO 10535:2006. Hoists for the transfer of disabled persons -- Requirements and test methods. Geneva, Switzerland. (For purchase) *In revision - to be published later in 2021*

<https://www.iso.org/standard/32155.html>

ISO/TR 12296:2012: Ergonomics -- Manual Handling of People in the Healthcare Sector. International Organization for Standardization (ISO). (For purchase) <https://www.iso.org/standard/51310.html>

Liberty Mutual Insurance. The Liberty Mutual Manual Materials Guidelines 2005. [http://libertymmhtables.libertymutual.com/CM\\_LMTablesWeb/taskSelection.do?action=initTaskSelection](http://libertymmhtables.libertymutual.com/CM_LMTablesWeb/taskSelection.do?action=initTaskSelection) Accessed March 25, 2013.

Moving and Handling Patients at a Glance (2016). Hamish MacGregor. Wiley-Blackwell. ISBN: 978-1-118-85343-6

NIOSH/ANA/VHA: SPH curriculum for schools of nursing <http://www.cdc.gov/niosh/docs/2009-127/>

OSHA and Worker Safety Handling with Care Practicing: Safe Patient Handling. The Joint Commission (TJC), 2017. [https://www.jcrinc.com/-/media/jcr/jcr-documents/about-jcr/osha-alliance/pages\\_from\\_ecn\\_20\\_2017\\_08-2.pdf?db=web&hash=E471E08D9AC494C0D2C740FD4103DACD](https://www.jcrinc.com/-/media/jcr/jcr-documents/about-jcr/osha-alliance/pages_from_ecn_20_2017_08-2.pdf?db=web&hash=E471E08D9AC494C0D2C740FD4103DACD)

The Patient Handling and Movement Assessment guide 2<sup>nd</sup> edition, 2019. [https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments\\_191008.pdf](https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments_191008.pdf)

Safe Patient Handling Toolkit. Federal OSHA 2013. [https://www.osha.gov/dsg/hospitals/patient\\_handling.html](https://www.osha.gov/dsg/hospitals/patient_handling.html)

Safe Patient Handling and Movement: A Practical Guide for Health Care Professionals (2006). Audrey Nelson Editor. Springer Publishing <http://www.springerpub.com/>

Safe Patient Handling and Mobility Guidebook VHA Center for Engineering & Occupational Safety and Health (CEOSH) St. Louis, Missouri. January 2016. <http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm>

Safe Patient Handling and Mobility Tip Sheet. AIHA/OSHA Alliance. American Industrial Hygiene Association (AIHA), 2014. [https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/OSHA-Quick-Tips-on-SPHM\\_Final-Mar2014.pdf](https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/OSHA-Quick-Tips-on-SPHM_Final-Mar2014.pdf)

Safe Patient Handling and Mobility (SPHM). *Website with Multiple Resources*. National Institute for Occupational Safety and Health (NIOSH). <https://www.cdc.gov/niosh/topics/safepatient/default.html>

Summaries of Our Applied Research: Patient Handling. Website with multiple resources. The OHIO State University Spine Research Institute. <https://spine.osu.edu/ergonomics/applied-research-patient-handling>

The Guide to the Handling of People (6th edition) 14 Feb 2011. Jacqui Smith. Back Care. UK

US Department of Defense Design Criteria Standard Human Engineering. MIL-STD 1472G (2012). [http://www.everyspec.com/MIL-STD/MIL-STD-1400-1499/MIL-STD-1472G\\_39997/](http://www.everyspec.com/MIL-STD/MIL-STD-1400-1499/MIL-STD-1472G_39997/) Accessed March 25, 2013.

## **Other**

### **Culture**

Changing the perceptions of a culture of safety for the patient and the caregiver: integrating improvement initiatives to create sustainable change. (2018). Black, J. M., Salsbury, S., & Vollman, K. M. *Critical care nursing quarterly*, 41(3), 226-239.

Conceptual frameworks for the workplace change adoption process: elements integration from decision making and learning cycle process. (2018). Radin Umar, R. Z., Sommerich, C. M., Lavender, S. A., Sanders, E., & Evans, K. D. *Ergonomics*, 61(9), 1173-1186.

Develop a Culture of Safety and other Safety Improvement Tools. Website with Multiple Resources. Institute for Healthcare Improvement (IHI). <http://www.ihl.org/resources/Pages/Changes/DevelopaCultureofSafety.aspx>

The Essential Role of Leadership in Developing a Safety Culture. The Joint Commission (TJC). *Sentinel Event Alert*, Issue 57, March 1, 2017. [https://www.jointcommission.org/-/media/tjc/documents/resources/patient-safety-topics/sentinel-event/sea\\_57\\_safety\\_culture\\_leadership\\_0317pdf.pdf](https://www.jointcommission.org/-/media/tjc/documents/resources/patient-safety-topics/sentinel-event/sea_57_safety_culture_leadership_0317pdf.pdf)

Every Injury to a Health Care Worker Is Preventable” Kathy Gerwig. Institute of Healthcare Improvement. Wednesday, January 22, 2020. <http://www.ihl.org/communities/blogs/every-injury-to-a-health-care-worker-is-preventable>

Framework for Improving Joy in Work. Perlo J, Balik B, Swensen S, Kabcenell A, Landsman J, Feeley D. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2017. <http://www.ihl.org/resources/Pages/IHIWhitePapers/Framework-Improving-Joy-in-Work.aspx>

Fundamentals of Total Worker Health® Approaches Essential Elements for Advancing Worker Safety, Health, and Well-Being. National Institute for Occupational Safety and Health (NIOSH), 2016. [https://www.cdc.gov/niosh/docs/2017-112/pdfs/2017\\_112.pdf](https://www.cdc.gov/niosh/docs/2017-112/pdfs/2017_112.pdf)

Health care workers’ experiences of workplace incidents that posed a risk of patient and worker injury: a critical incident technique analysis. (2021). Strid, E. N., Wåhlin, C., Ros, A., & Kvarnström, S. *BMC health services research*, 21(1), 1-12.

Interaction of Health Care Worker Health and Safety and Patient Health and Safety in the US Health Care System: Recommendations from the 2016 summit. Loeppke, R. et al. *American College of Occupational and Environmental Medicine (ACOEM) Position Statement. Journal of Occupational and Environmental Medicine*, 59(8), 803-813. 2017.

[http://www.acoem.org/uploadedFiles/Public\\_Affairs/Policies\\_And\\_Position\\_Statements/Guidelines/Position\\_Statements/Interaction\\_of\\_Health\\_Care\\_Worker\\_Health\\_and.17.pdf](http://www.acoem.org/uploadedFiles/Public_Affairs/Policies_And_Position_Statements/Guidelines/Position_Statements/Interaction_of_Health_Care_Worker_Health_and.17.pdf)

Just Culture Position Statement. American Nurses Association (ANA), January 28, 2010.

<https://www.nursingworld.org/practice-policy/nursing-excellence/official-position-statements/id/just-culture/#:~:text=ANA%20supports%20the%20Just%20Culture%20concept%20and%20its,in%20developing%20regional%20and%20state-wide%20Just%20Culture%20initiatives>

Just Culture: It's more than Policy. Paradiso, L., & Sweeney, N. Nursing Management (Springhouse): 50(6), 38-45. 2019.

[https://journals.lww.com/nursingmanagement/Fulltext/2019/06000/Just\\_culture\\_It\\_s\\_more\\_than\\_policy.9.aspx](https://journals.lww.com/nursingmanagement/Fulltext/2019/06000/Just_culture_It_s_more_than_policy.9.aspx)

Leading a Culture of Safety: A Blueprint for Success. American College of Healthcare Executives (ACHE). Institute for Healthcare Improvement NPSF, 2017. [https://www.osha.gov/shpguidelines/docs/Leading\\_a\\_Culture\\_of\\_Safety-A\\_Blueprint\\_for\\_Success.pdf](https://www.osha.gov/shpguidelines/docs/Leading_a_Culture_of_Safety-A_Blueprint_for_Success.pdf)

Managing the risk of employee burnout in hospitals. Liberty Mutual Insurance July 11 2020.

<https://business.libertymutual.com/insights/managing-the-risk-of-employee-burnout-in-hospitals/>

Measuring Best Practices for Workplace Safety, Health, and Well-Being. The Workplace Integrated Safety and Health Assessment. Sorensen, G., Sparer, E., Williams, J. A., Gundersen, D., Boden, L. I., Dennerlein, J. T., ... & Pronk, N. P. Journal of Occupational and Environmental Medicine, 60(5), 430-439. 2018. <https://dl.uswr.ac.ir/bitstream/>

Nurses Create a Culture of Patient Safety: It Takes More Than Projects. Morath, J. American Nurses Association (ANA), OJIN. September 3, 2015.

<http://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-16-2011/No3-Sept-2011/Nurses-Create-a-Culture-of-Patient-Safety.aspx#:~:text=Nurses%20play%20an%20essential%20role%20in%20developing%20the,provide%20leadership%20to%20strengthen%20the%20culture%20of%20safety>

Risky Business: A Mediated Model of Antecedents and Consequences of Presenteeism in Nursing. (2021). Rainbow, J. G., Gilbreath, B., & Steege, L. M. Nursing research, 70(2), 85-94.

Safer Together: A National Action Plan to Advance Patient Safety. Boston, Massachusetts: Institute for Healthcare Improvement; 2020. (Available at [www.ihl.org/SafetyActionPlan](http://www.ihl.org/SafetyActionPlan))

Safety and Health through Integrated, Facilitated Teams (SHIFT): stepped-wedge protocol for prospective, mixed-methods evaluation of the Healthy Workplace Participatory Program Punnett, L., Nobrega, S., Zhang, Y., Rice, S., Gore, R., & Kurowski, A. BMC Public Health, 20(1), 1-14. 2020. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7526105/>

Through the Eyes of the Workforce: Creating Joy, Meaning, and Safer Health Care. The Lucian Leape Institute at the National Patient Safety Foundation Feb 2013. <http://www.ihl.org/resources/Pages/Publications/Through-the-Eyes-of-the-Workforce-Creating-Joy-Meaning-and-Safer-Health-Care.aspx>

Towards eliminating avoidable harm in health care. Final draft Global Patient Safety Action Plan 2021-2030. World Health Organization (WHO) 2021 <https://www.who.int/teams/integrated-health-services/patient-safety/policy/global-patient-safety-action-plan>

Using shared governance to achieve a culture change in safe patient handling. (2018). Gusenius, T. M., Decker, M. M., & Weidemann, A. G. International journal of orthopaedic and trauma nursing, 31, 35-39.

## **Associations**

Association for Safe Patient Handling Professionals (ASPHP). <https://asphp.org/>

*Note:* Many other professional occupational safety, health, and ergonomics associations have health care interest groups that include SPHM as one of several healthcare worker safety topics e.g.,

- Human Factors & Ergonomics Society (HFES) [www.hfes.org](http://www.hfes.org)
- Institute of Industrial and Systems Engineers (IISE)/Applied Ergonomics [www.iise.org](http://www.iise.org)
- Association of Occupational Health Professionals (AOHP). [www.aohp.org](http://www.aohp.org)
- American Society of Safety Professionals (ASSP) [www.assp.org](http://www.assp.org)

## **Misc.**

Can Exoskeletons Reduce Musculoskeletal Disorders in Healthcare Workers? Posted on November 4, 2020 by Liying Zheng, PhD. NIOSH Science blog. National Institute for Occupational Safety and Health (NIOSH).

<https://blogs.cdc.gov/niosh-science-blog/2020/11/04/exoskeletons-hc/>

Comprehensive Review of SPHM Articles from 2005-2016: Section 12. SPHM and Bariatrics. American Journal of Safe Patient Handling and Movement, 6, (1):S-1-26

Exoskeletons and Occupational Health Equity. Posted on December 14, 2020 by Lakshmi D. Robertson, et al. NIOSH Science blog. National Institute for Occupational Safety and Health (NIOSH). <https://blogs.cdc.gov/niosh-science-blog/2020/12/14/exoskeletons-health-equity/>

Facility and Patient Needs Assessment: Worker Safety in Hospitals. Occupational Health and Safety Administration (OSHA) (n.d.). [https://www.osha.gov/dsg/hospitals/needs\\_assessment.html](https://www.osha.gov/dsg/hospitals/needs_assessment.html)

The Facts About Ergonomics: Dispelling Myths: Position Statement. American Industrial Hygiene Association (AIHA), 2019. [https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Facts-About-Ergonomics-Dispelling-Myths-Position-Statement\\_200601\\_130224.pdf](https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Facts-About-Ergonomics-Dispelling-Myths-Position-Statement_200601_130224.pdf)

Health Care Workers Compensation Barometer; Actuarial Analysis, November 2018. Jones V., Missar V., Zmyslowski K., Cregg, H., & Zhang, K. Aon plc. <https://www.aon.com/risk-services/thought-leadership/report-2018-health-care-barometer.jsp>

Healthcare Workers – Home Health. *Website with Multiple Resources*. National Institute for Occupational Safety and Health (NIOSH). <https://www.cdc.gov/niosh/topics/healthcare/homehealthcare.html>

Home Healthcare. *Website with Multiple Resources*. The Occupational Safety and Health Administration (OSHA). <https://www.osha.gov/home-healthcare>

Health Nurse Healthy Nation 2-year Highlights 2018-2019 American Journal of Nursing Sept. 2020 3-11. [https://www.healthynursehealthynation.org/globalassets/all-images-view-with-media/about/2019-hnhn\\_highlights.pdf](https://www.healthynursehealthynation.org/globalassets/all-images-view-with-media/about/2019-hnhn_highlights.pdf)

Health Nurse Healthy Nation 3-year Highlights 2018-2020. American Journal of Nursing Sept. 2019 3-11. [https://www.healthynursehealthynation.org/globalassets/all-images-view-with-media/about/2020-hnhn\\_sup-8.pdf](https://www.healthynursehealthynation.org/globalassets/all-images-view-with-media/about/2020-hnhn_sup-8.pdf)

Impact of Safe Patient Handling Legislation on Musculoskeletal Disorders Among California Healthcare Workers Lee, S.J. (2020). Labor Research and Evaluation (LRE) Grants Grant No.: EO-30270-17-60-5-6. [https://www.dol.gov/sites/dolgov/files/OASP/evaluation/pdf/LRE\\_Lee-](https://www.dol.gov/sites/dolgov/files/OASP/evaluation/pdf/LRE_Lee-)

Intention to use exoskeletons in geriatric care work: need for ergonomic and social Design. (2020). Turja, T., Saurio, R., Katila, J., Hennala, L., Pekkarinen, S., & Melkas, H. Ergonomics in Design, 1064804620961577.

NIOSH Science Blog Posts - Numerous Occupational Health & Safety Topics. <https://blogs.cdc.gov/niosh-science-blog/>

Oregon Coalition for Health Care Ergonomics (OCHE) website: SPH information; evidence base, bariatrics page and more.... [www.hcergo.com](http://www.hcergo.com)

Van Aerschot, L., Parviainen, J. (2020). Robots responding to care needs? A multitasking care robot pursued for 25 years, available products offer simple entertainment and instrumental assistance. (2020). Van Aerschot, L., Parviainen, J. *Ethics Inf Technol* 22, 247–256. <https://doi.org/10.1007/s10676-020-09536-0>

Person transfer assist systems: a literature review. (2021). Sivakanthan, S., Blaauw, E., Greenhalgh, M., Koontz, A. M., Vegter, R., & Cooper, R. A. *Disability and Rehabilitation: Assistive Technology*, 16(3), 270-279.

Recommended practices for Safety and Health Programs. OSHA 3885. Occupational Safety and Health Administration (OSHA), 2016. <https://www.osha.gov/Publications/OSHA3885.pdf>

Robots responding to care needs? A multitasking care robot pursued for 25 years, available products offer simple entertainment and instrumental assistance. Van Aerschot, L., Parviainen, J. *Ethics Inf Technol* 22, 247–256 (2020). <https://doi.org/10.1007/s10676-020-09536-0>

Summaries of Our Applied Research: Patient Handling. Website with multiple resources. The OHIO State University Spine Research Institute. <https://spine.osu.edu/ergonomics/applied-research-patient-handling>

Worker Safety in Hospitals Safety and Health Management Systems. Tools and Resources. Website with multiple resources. Occupational Safety and Health Administration [https://www.osha.gov/dsg/hospitals/mgmt\\_tools\\_resources.html](https://www.osha.gov/dsg/hospitals/mgmt_tools_resources.html)

Physical and psychosocial work environmental risk factors for back injury among healthcare workers: prospective cohort study. (2019). Andersen, L. L., Vinstrup, J., Villadsen, E., Jay, K., & Jakobsen, M. D. *International journal of environmental research and public health*, 16(22), 4528.

Musculoskeletal disorders and psychosocial factors at work. Report 142. (2018). Roquelaure, Y. European Trade Union Institute. [https://www.etui.org/sites/default/files/ez\\_import/EN-Report-142-MSD-Roquelaure-WEB.pdf](https://www.etui.org/sites/default/files/ez_import/EN-Report-142-MSD-Roquelaure-WEB.pdf)

Poor sleep is a risk factor for low-Back pain among healthcare workers: prospective cohort study. (2020). Vinstrup, J., Jakobsen, M. D., & Andersen, L. L. *International journal of environmental research and public health*, 17(3), 996.

Investigation of psychosocial factors on upper limb musculoskeletal disorders and the prevalence of its musculoskeletal disorders among nurses: a systematic review and meta-analysis. (2021). Zare, A., Choobineh, A., Hassanipour, S., & Malakoutikhah, M. *International Archives of Occupational and Environmental Health*, 1-24.

## **SPHM and Covid-19**

Early Mobility During COVID-19. Perspectives from Industry Leaders Around the World Int. (2021). *Journal SPHM Vol 11(1)* 46-51.

Evaluation of Techniques for Prone Positioning Using Safe Patient Handling Equipment. (2020). Church M & Chechile J. *Int. Journal SPHM* 10(3): 98-110

Moving and Handling Solutions in Response to the COVID-19 Pandemic in the UK: Exploring the Impact of COVID-19 on a Caregiver's Ability to Carry out Their Role in Home Care. Harrison, D. & Webb, J. (2020). *Journal SPHM Vol 10 (2)* 55-58.

Progressive Mobility of Patients supported on ECMO form Dependency to Ambulation Utilizing Safe Patient Handling Techniques. (2021). Labreche, L., et al. *Int. Journal SPHM Vol 11 (2)* 88-97.

Safe Handling of Patients during COVID, Enos, L (2021) *Applied Ergonomics Conference 2021*. Webinar. <https://www.iise.org/AEC/details.aspx?id=32856>

Safe Patient Handling and Mobility Plan for the COVID-19 Units at a Level 1 Trauma Center in Florida. Labreche, M.(2020). *Journal SPHM Vol 10 (2)* 59-66.

Safe Patient Handling and Mobility, Infection Prevention and Control, and COVID-19. Enos, L. (2020). *Journal SPHM Vol 10 (2)* 67-73.

SPHM in the Pandemic Resources. Website with Multiple Resources. Association for Safe Patient Handling Professionals (ASPHP). <https://asphp.org/resources-tools/sphm-in-the-pandemic-resources/>

The Impact of Coronavirus (COVID-19) on Safe Patient Handling and Mobility: Clinical Considerations for Best Practice. Latval, S., & Masterman, R. (2020). Journal SPHM Vol 10 (2) 50-54.

### **Covid & Healthcare Workers**

Balance, health, and workplace safety: experiences of new nurses in the context of total worker health. Oneal, G., Graves, J. M., Diede, T., Postma, J., Barbosa-Leiker, C., & Butterfield, P. (2019). Workplace health & safety, 67(10), 520-528.

Integration of human factors/ergonomics in healthcare systems: A giant leap in safety as a key strategy during Covid-19. Rodríguez, Y., & Hignett, S. (2021). Human Factors and Ergonomics in Manufacturing & Service Industries.

Physical and mental health impacts of COVID-19 on healthcare workers: A scoping review. International Journal of Shaukat, N., Ali, D. M., & Razzak, J. (2020). Emergency Medicine, 13(1), 1-8.

The impact of COVID-19 on healthcare worker wellness: A scoping review. Shreffler, J., Petrey, J., & Huecker, M. (2020). Western Journal of Emergency Medicine, 21(5), 1059.

The psychological impact of COVID-19 and other viral epidemics on frontline healthcare workers and ways to address it: A rapid systematic review. (2020). Cabarkapa, S., Nadjidai, S. E., Murgier, J., & Ng, C. H. Brain, behavior, & immunity-health, 100144.

Year One COVID-19 Impact Assessment Survey. American Nurses Association Covid-19 Resource Center <https://www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/what-you-need-to-know/year-one-covid-19-impact-assessment-survey/>

### **SPHM Equipment and Design**

Safe Patient Handling and Mobility Equipment Purchasing Checklist, 4th Revision 2018. Enos, L. International Journal of Safe Patient Handling and Movement, 10 (1): 13-36. 2018. Can be accessed from the Oregon Association of Hospitals and Health Systems (OAHHS) Workplace Safety Initiative webpage.

<https://oahhs.org/assets/Safe%20Patient%20Handling/SPH%20Equipment%20%26%20Slings%20Purchasing%20Checklist%202018.pdf> or from the Oregon Coalition for Healthcare Ergonomics (OCHE) website. <https://www.hcergo.org/wp-content/uploads/2018/09/Equipment-checklist-for-Enos-workshop-int-SPHM-conf-2018.pdf>

Safe Patient Handling Equipment Purchasing Checklist. Enos, L. American Journal of Safe Patient Handling and Movement, 3, (1): S1-16.

Checklist for Choosing and Purchasing Slings. Enos, L. International Journal for Safe and Handling and Mobility in Volume 8 (4).

### **Purchasing, Design, Installation Related**

Americans with Disabilities (ADA) Access to Medical Care For Individuals With Mobility Disabilities – Use of SPH equipment in clinics. Department of Health and Human Services Office for Civil Rights (HHS OCR), 2010.

<https://www.hhs.gov/sites/default/files/ocr/civilrights/understanding/disability/adamobilityimpairmentsguidance.pdf>

Corrective and Preventive Maintenance Checklist for Ceiling Mounted Patient Lifts. US Dept. of Veterans Affairs. <https://www.publichealth.va.gov/employeehealth/patient-handling/index.asp>

Installation and Relocation Checklist for Ceiling Mounted Patient Lifts. US Dept. of Veterans Affairs <https://www.publichealth.va.gov/employeehealth/patient-handling/index.asp>



Guidebook for Architects and Planners: Functional Design for Mobilisation and Ergonomics. 4th ed. Eslov, Sweden: ArjoHuntleigh; 2014.

Health Care Design and Construction Guidelines 2018 – Incorporate Bariatrics and Safe Patient Handling & Movement. The Facilities Guideline Institute. [www.fgiguilines.org](http://www.fgiguilines.org) and the Patient Handling and Movement Assessment guide 2<sup>nd</sup> edition, 2019. [https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments\\_191008.pdf](https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments_191008.pdf)

How Much SPH Equipment Do you Need? Workplace Safety Initiative. Oregon Association of Hospitals and Health Systems (OAHHS), 2014. <https://oahhs.org/assets/Safe%20Patient%20Handling/How%20Much%20SPM%20Equipment%20Do%20you%20NeedEnos.pdf>

The Office of Construction & Facilities Management Veterans Health Administration Vendor Portal SECTION 11 73 00 ceiling mounted patient lift system <https://www.cfm.va.gov/TIL/spec/117300.docx>

Patient Handling and Mobility Assessments. Matz, M., et.al., Facility Guidelines Institute, 2nd ed. 2019. [https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments\\_191008.pdf](https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments_191008.pdf)

Patient Handling (Lifting) Equipment Coverage & Space Recommendations 2016. US Dept. of Veterans Affairs <https://www.publichealth.va.gov/employeehealth/patient-handling/index.asp>

PtD-NIOSH Prevention Through Design. National Institute for Occupational Safety and Health (NIOSH). 2013. <https://www.cdc.gov/niosh/topics/ptd/>

Safe Patient Handling Program and Facility Design. Veterans Health Administration (VHA) Directive 2010-032 June 28, 2010. [http://www.va.gov/vhapublications/ViewPublication.asp?pub\\_ID=2260](http://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=2260)

Safety Risk Assessment Toolkit | A Process to Mitigate Risk [CHD Tools].The Center for Health Design. (2014, 2017). <https://www.healthdesign.org/sra>

Patient Handling and Mobility Assessments. Matz, M., et.al., Facility Guidelines Institute, 2nd ed. 2019. [https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments\\_191008.pdf](https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments_191008.pdf)

### **Regulatory Related to Patient Lifts**

International Organization for Standardization. ISO 10535:2006. Hoists for the transfer of disabled persons -- Requirements and test methods. Geneva, Switzerland. *(For purchase) In revision - to be published later in 2021.* <https://www.iso.org/standard/32155.html>

CFR - Code of Federal Regulations Title 21. Food and Drug Administration. <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=880.5510>

Code of Federal Regulations Title 21 Volume 8 Revised as of April 1, 2017 **PART 880 -- GENERAL HOSPITAL AND PERSONAL USE DEVICES** Subpart F--General Hospital and Personal Use Therapeutic Devices:

- o 21CFR880.5510 - <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=880.5510> and
- o 21CFR880.5500 - <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=880.5500>

Home Healthcare Medical Devices: A Checklist. FDA <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ucm070217.htm>

Human Factors Program and Medical Device Use resources. Information for Health Care Professional, Manufacturers and Consumers. <http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/HumanFactors/default.htm>

Manufacturer and User Facility Device Experience or MAUDE data represents reports of adverse events involving medical devices. <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfmaude/textsearch.cfm>

Medical Devices - General Hospital Devices and Supplies: Patient Lifts

<http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/ucm308622.htm>

MedSun: Medical Product Safety Network adverse event reporting program designed to promote reporting of medical device issues by healthcare organizations. Searchable data base provided. U.S. Food & Drug Administration (FDA).

<http://www.fda.gov/medicaldevices/safety/medsunmedicalproductsafetynetwork/default.htm>

Recognized Consensus Standards. Food and Drug Administration. Retrieved from

[https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfStandards/detail.cfm?standard\\_identification\\_no=31767](https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfStandards/detail.cfm?standard_identification_no=31767)

Recalls, Market Withdrawals, & Safety Alerts. US Food and Drug Administration (FDA)

<http://www.fda.gov/Safety/Recalls/default.htm>

### ***Ergonomics, Safety and Effectiveness of Using SPHM Equipment***

**Book:** The Working Back: A Systems View. William S. Marras.2008. John Wiley & Sons, Inc.

#### **Ceiling and Floor Lifts**

The Role of Ceiling Lifts in a Safe Patient Handling and Mobility Programs. Enos, L. International Journal of Safe Patient Handling and Movement, 8 (1):25-45 (2018). Good overall guide to choosing, installing and maintaining ceiling lift systems

A biomechanical assessment of floor and overhead lifts using one or two caregivers for patient transfers. Dutta, T., Holliday, P. J., Gorski, S. M., Baharvandy, M. S., & Fernie, G. R. (2012). Applied ergonomics, 43(3), 521-531.

Challenging the myth that it takes too long to use SPHM technology: a task time investigation. Mehan P. Am J SPHM.2014;4(2):46-51.

Comparison of required operating forces between floor-based and overhead-mounted patient lifting devices. Rice, M. S., Woolley, S. M., & Waters, T. R. (2009). Ergonomics, 52(1), 112-120.

Comparison of cumulative low back loads of caregivers when transferring patients using overhead and floor mechanical lifting devices. P. L. Santaguida et al., Clinical Biomechanics 20 (2005):906–16.

Comparison of lift use, perceptions, and musculoskeletal symptoms between ceiling lifts and floor-based lifts in patient handling. (2020). Lee, S. J., & Rempel, D. Applied ergonomics, 82, 102954.

Effectiveness of Installing Overhead Ceiling Lifts: Reducing Musculoskeletal Injuries in an Extended Care Hospital Unit. Ronald, L.A., Yassi, A., Spiegel, J., Tate, R., Tait, D., and Mozel, M.R. (2002). AAOHN Journal, 50(3), 120-127.

Effectiveness of a ceiling-mounted patient lift system in reducing occupational injuries in long term care. Tiesman, H. M., Nelson, A. L., Charney, W., Siddharthan, K., & Fragala, G.(2003). Journal of Healthcare Safety, 1(1), 34-40.

The Effectiveness of Ceiling Hoists in Transferring People with Disabilities. Jung, Y.M. & Bridge, C. (2009). Sydney: Home Modification Information Clearinghouse, University of New South Wales. Retrieved from

<http://www.homemods.info/Download.ashx?File=0dea3ea1221a81c25de3d9714f7c1e>

Efficiency of Overhead Ceiling Lifts in Reducing Musculoskeletal Injury Among Carers Working in Long-Term Care Institutions. Alamgir, H., Shicheng, Y., Fast, C., Hennessy, S., Kidd, C., and Yassi, A. (2008). Injury, 39 (5), 570-577.”

- Ergonomic Assessment of Floor-based and Overhead Lifts. Waters, T. R., Dick, R., Lowe, B., Werren, D., & Parsons, K. (2012). *Am. J. Safe Patient Handl. Mov.* 2, 2(4), 119
- Ergonomics and usability of patient lifts in elderly care. Fagerström V; Tamminen-Peter L Hoitotiede 2010; 22(2): 118-128. (11p)
- Evaluation of the effectiveness of portable ceiling lifts in a new long-term care facility. Miller A, Engst C, Tate RB, Yassi A. *Applied Ergonomics*, 2006;37(3):377-385.
- Evaluation of Ceiling Lifts in Health Care setting: Patient outcome and perceptions. Alamgir, H, Wei, O, Gorman, E, Fast, C, Shicheng, Y and Kidd, C. *AAOHN Journal* Vol 57 (9), 374-380.
- Evaluating the use of ceiling lifts in the operating room/Evaluation de l'utilisation de leve-personnes fixes au plafond en salle d'operation. Thomas-Olson, L., Gee, M., Harrison, D., & Helal, N. (2015). *ORNAC journal*, 33(1), 13-22.
- Facing the challenge of patient transfers: Using ceiling lifts in healthcare facilities. Vieira, E.R. & Miller, L. (2008). *Health Environments Research & Design Journal*, 2(1), 6-16.
- Implementing a resident lifting system in an extended care hospital: demonstrating cost-benefit. (2002). Spiegel J, Yassi A, Ronald LA, Tate RB, Hacking P, & Colby T. *AAOHN Journal* 50(3):128–134.
- The influence of ergonomic devices on mechanical load during patient handling activities in nursing homes. Koppelaar E, Knibbe HJ, Miedema HS, Burdorf A. *Ann Occup Hyg* 2012; 56(6): 708-18.
- Lumbar spine forces during maneuvering of ceiling-based and floor-based patient transfer devices. Marras, W. S., Knapik, G. G., & Ferguson, S. (2009). *Ergonomics*, 52(3), 384-397.
- The Illustrated Guide to Safe Patient Handling and Movement (2009). Kathleen Motacki, Audrey L Nelson, Dr Nancy Menzel. Springer Publishing [www.springerpub.com](http://www.springerpub.com)
- Occupational Health & Safety Agency for Healthcare in BC. A literature review: ceiling lifts as an intervention to reduce the risk of patient handling injuries. Vancouver, BC: Occupational Health & Safety Agency for Healthcare in BC; 2006.
- Overhead lift systems reduce back injuries among burn care providers. Anyan, W., Faraklas, I., Morris, S., & Cochran, A. (2013). *Journal of Burn Care & Research*, 34(6), 586-590.
- Patient Lift's Safety Guide. 2013 U.S. Department of Health and Human Services, Food and Drug Administration (FDA) <https://www.fda.gov/medicaldevices/productsandmedicalprocedures/generalhospitaldevicesandsupplies/ucm308622.htm>
- Patient Lifts. U.S. Food & Drug Administration (FDA), 2014. <https://www.fda.gov/media/88149/download>
- Reduction of musculoskeletal injuries in intensive care nurses using ceiling-mounted patient lifts. Silverwood, S., & Haddock, M. (2006). *Dynamics*, 17, 19-21.
- Safe patient handling behaviors and lift use among hospital nurses: A cross-sectional study. Lee, S. J., & Lee, J. H. (2017). *International journal of nursing studies*, 74, 53-60.
- Safe Patient Handling Equipment Challenges in Inpatient Psychiatric Units: Design Recommendations and Potential Solutions. Monaghan, H.M. (2011). [http://www.visn8.va.gov/PatientSafetyCenter/fallsteam/Psychiatry\\_EquipmentRedesign.pdf](http://www.visn8.va.gov/PatientSafetyCenter/fallsteam/Psychiatry_EquipmentRedesign.pdf)
- Spine loading during the application and removal of lifting slings: the effects of patient weight, bed height and work method. Nagavarapu, S., Lavender, S. A., & Marras, W. S. (2017). *Ergonomics*, 60(5), 636-648.
- Successful Implementation of Ceiling-Mounted Lift Systems. Weinel, D. (2008). *Rehabilitation Nursing*, 33(2), 63-66.
- The three-year economic benefits of a ceiling lift intervention aimed to reduce healthcare worker injuries. Chhokar R, Engst C, Miller A, Robinson D, Tate RB, Yassi A. *Appl Ergon* 2005; 36(2): 223-9.

### **Friction Reducing Devices**

Comparison of caregiver forces required for sliding a patient up in bed using an array of slide sheets. Bartnik LM, Rice MS. *Workplace Health Saf.* 2013;61(9):393-400.

Effect of repositioning aids and patient weight on biomechanical stresses when repositioning patients in bed. (2021). Wiggermann, N., Zhou, J., & McGann, N. *Human factors*, 63(4), 565-577.

Evaluation of Different Patient Transfer Devices in Reducing Biomechanical Exposures among Professional Caregivers. (2018, September). Hwang, J., Kuppam, V. A., Chodraju, S. S. R., Chen, J., & Kim, J. H. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 62, No. 1, pp. 933-937). Sage CA: Los Angeles, CA: SAGE Publications.

Forces involved when sliding a patient up in bed. (2018). Larson, R. E., Murtagh, E. M., & Rice, M. S. *Work*, 59(3), 439-448.

Friction-reducing devices for lateral patient transfers: a clinical evaluation. Baptiste A, Boda SV, Nelson AL, Lloyd JD, Lee WE III. *AAOHN J.* 2006;54(4):173-180.

Lateral transfer data report. Baptiste A, Steadman K. Published May 23, 2013.

[http://cms.cws.net/content/barrierfreeaccess.com/files/Rollbord/Lateral\\_Transfer\\_Device\\_Study.pdf](http://cms.cws.net/content/barrierfreeaccess.com/files/Rollbord/Lateral_Transfer_Device_Study.pdf)

Safe patient handling and movement series, AORN ergonomic tool 1: lateral transfer of a patient from a stretcher to an OR bed. Waters T, Baptiste A, Short M, Plante-Mallon L, Nelson A. *AORN J.* 2011;93:334-339.

The evaluation of mechanical devices for lateral transfers on perceived exertion and patient comfort. Pellino TA, Owen B, Knapp L, Noack J. *Orthop Nurs.* 2006;25(1):4-10.

Repositioning a passive patient in bed: Choosing an ergonomically advantageous assistive device. Weiner, C., Kalichman, L., Ribak, J., & Alperovitch-Najenson, D. (2017). *Applied ergonomics*, 60, 22-29.

The HoverMatt system for patient transfer: enhancing productivity, efficiency, and safety. Barry J. *J Nurs Adm.* 2006;36(3):114-117.

### **Stand Assist Systems**

Comparative kinematic and electromyographic assessment of clinician- and device-assisted sit-to-stand transfers in patients with stroke. Burnfield JM, McCrory B, Shu Y, Buster TW, Taylor AP, Goldman AJ. *Phys Ther.* 2013;93(10):1331-1341.

Frequently asked questions about sit-stand patient-resident devices. Washington State Department of Labor and Industries 2000. [https://assets-global.website-files.com/5d710ad86986a61c7247fe82/5dd0b5c0d5c04cdbf46ba5be\\_Sit-to-Stand-Patient.pdf](https://assets-global.website-files.com/5d710ad86986a61c7247fe82/5dd0b5c0d5c04cdbf46ba5be_Sit-to-Stand-Patient.pdf)

Kinematic and electromyographic analyses of normal and device-assisted sit-to-stand transfers. Burnfield JM, Shu Y, Buster TW, Taylor AP, McBride MM, Krause ME. *Gait Posture.* 2012;36(3):516-522.

The use of the self-standing turning transfer device to perform bed-to-chair transfers reduces physical stress among caregivers of older patients in a middle-income developing country. Goh C, Muslimah Y, Ng SC, Subramanian P, Tan MP. *Front Med.* 2014;1(32).

### **Slings**

“A Comprehensive Review of Patient Slings” Enos, L. *International Journal of Safe Patient Handling and Movement*, 9 (1):15-36. March 2019.

Equipment Program Clinical Considerations for Prescribers Hoists. Government of South Australia Dept. of Communities and Social Inclusion. (2013). [http://svc015.wic006wss.server-web.com/Shared supporting documents/Hoists - Clinical Considerations for Prescribers.doc](http://svc015.wic006wss.server-web.com/Shared%20supporting%20documents/Hoists%20-%20Clinical%20Considerations%20for%20Prescribers.doc)

Healthcare Recipient Sling and Hanger Bar Compatibility Guidelines. April 2016. American Association for Safe Patient Handling and Movement. <https://aasphm.org/wp-content/uploads/AASPHM-Sling-Hanger-Bar-Guidelines-2016.pdf> or [www.hcergo.org](http://www.hcergo.org)

Health and Safety Executive (2012). Getting to grips with hoisting people. Health Services Information Sheet No 3. Retrieved from <http://www.hse.gov.uk/pubns/hsis3.pdf>

Proper Sling Selection and Application while using Patient Lifts (2008). Baptiste, A. et al. *Rehabilitation Nursing*. 33(1);22-32

Sling Safety. Murray, E., and Monaghan, H. *American Journal of Safe Patient Handling and Movement*, (2)3: S1-S17

Spine loading during the application and removal of lifting slings: the effects of patient weight, bed height and work method. (2017). Nagavarapu, S., Lavender, S. A., & Marras, W. S. *Ergonomics*, 60(5), 636-648.

### **Misc.**

Ergonomic evaluation of brake pedal and push handle locations on hospital beds. (2017). Zhou, J., & Wiggermann, N. *Applied ergonomics*, 60, 305-312.

The effects of hospital bed features on physical stresses on caregivers when repositioning patients in bed. (2021). Zhou, J., & Wiggermann, N. *Applied Ergonomics*, 90, 103259.

### **Leaving Slings and Air Assist Devices Under Patients**

Biomechanical Evaluation of Pressure Distribution during Extended Use of HoverMatt™ Technology.

John D. Lloyd, Ph.D., CPE, CBIS, 2010. <http://www.hcergo.org/Equipment%20Guide%20%26%20Resources.htm>  
<http://www.statinahealthcare.com.au/wp-content/uploads/2014/10/Evaluation-of-Pressure-Distribution-with-HoverMatt.pdf>

Comparative Surface Analysis of Patient Care Slings and Body Pressure & Temperature. Kathleen Nelson, Southcoast Hospitals Group. Proceedings SPHM conference East 2013

The Comparative Effects of Hoist Sling Fabrics on Gluteal Interface Pressure in Healthy Individuals. Elizabeth Van Dyck, et al. *Am J SPHM* • Volume 6, Number 1, 25-32

European Pressure Ulcer Advisory Panel (EPUAP) (2014). NPUAP-EPUAP-PPPIA Pressure Ulcer Treatment & Prevention 2014 Quick Reference Guide. <http://www.epuap.org/pu-guidelines/#2014guidelines&qrg>

The Effects of Sitting on a Mechanical Lift Sling on Interface Seat Pressure. (2015). Crane, B., Wininger, M., Strydom, E., & Hulse, J. *Topics in Geriatric Rehabilitation*, 31(1), 67

Hospital Acquired Pressure Ulcers/Injuries (HAPU/I): 2017. Chicago, IL: Health Research & Educational Trust. [https://patientcarelink.org/wp-content/uploads/2017/10/2017-hapu\\_change\\_package\\_508.pdf](https://patientcarelink.org/wp-content/uploads/2017/10/2017-hapu_change_package_508.pdf)

The Impact of Hoist Sling Fabrics on Gluteal Interface Pressure while Sitting in Healthy Individuals: A Controlled Pre- post Test Study. Jo Mellson, et al. *Am J SPHM*. 2012;2(3):79-86.

The impact of hoist sling fabrics on interface pressure whilst sitting in healthy volunteers and wheelchair users: A comparative study (2018). Webb, J. *Journal of Tissue Viability* 27 (2018) 90e94

Lifting and Transfer Devices: A Bridge Between Safe Patient Handling and Pressure Ulcer Prevention Michael Clark Lyn Phillips, Hanneke JJ Knibbe,. *Am J SPHM* • Volume 5, Number 4, 154-160

Do Lift Slings Significantly Change the Efficacy of Therapeutic Support Surfaces? Brienza D, Deppisch M, Gillespie C, et al. Washington, DC: National Pressure Ulcer Advisory Panel (NPUAP); 2015.

[https://cdn.ymaws.com/npiap.com/resource/resmgr/white\\_papers/1a\\_npuap-lift-sling-white-p.pdf](https://cdn.ymaws.com/npiap.com/resource/resmgr/white_papers/1a_npuap-lift-sling-white-p.pdf)

FSA Interface Pressure Testing of Slings Test Report. Alpha Modalities LLC 2010.

<http://www.hcergo.org/Equipment%20Guide%20%26%20Resources.htm>

Pressure ulcer risk of patient handling sling use. (2015). Peterson, M. J., Kahn, J. A., Kerrigan, M. V., Gutmann, J. M., & Harrow, J. J. *Journal of Rehabilitation Research & Development*, 52(3).

Reducing the incidence and risk of pressure sores, manual handling loading and carer costs using “in-bed” systems. A study conducted by: Melanie Sturman-Floyd MSc RGN, MSF Manual Handling and Back Care/Norfolk County Council. 2011. <http://www.communityequipment.org.uk/wp-content/uploads/Sturman-Floyd-paper-2011-Complete-final-paper.pdf>

Repositioning slings: the effects on skin pressure, pH and temperature. Edupuganti, K and Price, C. *Am journal SPHM* vol 3(2) p48- 54.

### **SPHM Program Outcomes**

An Inspection Tool and Process to Identify Modifiable Aspects of Acute Care Hospital Patient Care Units to Prevent Work-Related Musculoskeletal Disorders. Grant, M. P., Okechukwu, C. A., Hopcia, K., Sorensen, G., & Dennerlein, J. T. *Workplace Health & Safety*, 66(3):144-158. 2018. <https://doi.org/10.1177/2165079917718852>

A biomechanical evaluation of potential ergonomic solutions for use by firefighter and EMS providers when lifting heavy patients in their homes. (2020). Lavender, S. A., Sommerich, C. M., Bigelow, S., Weston, E. B., Seagren, K., Pay, N. A., ... & Marras, W. S. *Applied ergonomics*, 82, 102910

A Survey of Healthcare Workers on Safe Patient Handling and Mobility Resource Availability, Utilization, and Adherence. Waltrip, K. *Dissertations*. 910. 2019. <https://irl.umsl.edu/dissertation/910>

Assessment of the impact of lifting device use on low back pain and musculoskeletal injury claims among nurses. Burdorf A, et al. *Occup Environ Med* 2013;70:491–497.

Barriers to the use of assistive devices in patient handling. Noble, N. L., & Sweeney, N. L. (2018). *Workplace health & safety*, 66(1), 41-48.

Beyond Getting Started: A Resource Guide for Implementing a Safe Patient Handling Program in the Acute Care Setting. Association of Occupational Health Professional in Healthcare (AOHP), 2014.

[https://www.aohp.org/aohp/Portals/0/Documents/ToolsForYourWork/free\\_publications/Beyond%20Getting%20Started%20Safe%20Patient%20Handling%20-%20May%202014.pdf.pdf](https://www.aohp.org/aohp/Portals/0/Documents/ToolsForYourWork/free_publications/Beyond%20Getting%20Started%20Safe%20Patient%20Handling%20-%20May%202014.pdf.pdf)

Creating a culture of safety for safe patient handling. Stevens L, Rees S, Lamb KV, Dalsing D. *Orthop Nurs*\_ 2013 May-Jun; 32(3):155-64.

Current Topics in Safe Patient Handling and Mobility. *American Nurse Today*, Sept. 2014.

[https://www.myamericannurse.com/wp-content/uploads/2014/07/ant9-Patient-Handling-Supplement-821a\\_LOW.pdf](https://www.myamericannurse.com/wp-content/uploads/2014/07/ant9-Patient-Handling-Supplement-821a_LOW.pdf)

Development and Evaluation of a Multifaceted Ergonomics Program to Prevent Injuries Associated with Patient Handling Tasks. Nelson, A. Matz M, Chen F, Siddharthan K, Lloyd J, Fragala G (2006). *International Journal of Nursing Studies*, 43(6):717–733.

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1058&context=veterans>

Developing manual handling skills in relative social isolation: A case study of Australian home care workers. (2018). Palesy, D. *Journal of Adult and Continuing Education*, 24(1), 37-57.

- Differences among nursing homes in outcomes of a safe resident handling program. (2012). Kurowski, A., Gore, R., Buchholz, B., & Punnett, L. *Journal of Healthcare Risk Management*, 32(1), 35-51.
- Do technical aids for patient handling prevent musculoskeletal complaints in health care workers?—A systematic review of intervention studies. (2018). Hegewald, J., Berge, W., Heinrich, P., Staudte, R., Freiberg, A., Scharfe, J., ... & Seidler, A. *International journal of environmental research and public health*, 15(3), 476.
- Early career nurses with fewer supportive peers for safe patient handling are likely to quit. (2018). Hurtado, D. A., Heinonen, G. A., Dumet, L. M., & Greenspan, S. A. *International nursing review*, 65(4), 596-600.
- Effects of a national safe patient handling program on nursing injury incidence rates. Powell-Cope, G., Toyinbo, P., Patel, N., Rugs, D., Elnitsky, C., Hahm, B., ... & Hodgson, M. (2014). *Journal of Nursing Administration*, 44(10), 525-534.
- Evaluation of a Continued Safe Patient and Handling Program. Daily, M. K. Dissertation. UMASS-Amherst, 2014.  
[https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1035&context=nursing\\_dnp\\_capstone](https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1035&context=nursing_dnp_capstone)
- Factors associated with safe patient handling behaviors among critical care nurses. Lee, S.J., Faucett, J., Gillen, M., Krause, N., Landry, L., 2010. *Am. J. Ind. Med.* 53 (9), 886–897.
- Factors associated with lift equipment use during patient lifts and transfers by hospital nurses and nursing care assistants: A prospective observational cohort study. Kucera, K. L., Schoenfisch, A. L., McIlvaine, J., Becherer, L., James, T., Yeung, Y. L., ... & Lipscomb, H. J. (2019). *International journal of nursing studies*, 91, 35-46.
- Guideline for Safe Patient Handling: Evidence Table. Association of periOperative Registered Nurses (AORN), 2017. [https://www.aorn.org/-/media/aorn/guidelines/evidence-rating-and-tables/sphm\\_evidence\\_table.pdf?la=en&hash=65CD0922A47F76C1A7AD9AFED04C9616](https://www.aorn.org/-/media/aorn/guidelines/evidence-rating-and-tables/sphm_evidence_table.pdf?la=en&hash=65CD0922A47F76C1A7AD9AFED04C9616)
- Implementation and adoption of mechanical patient lift equipment in the hospital setting: the importance of organizational and cultural factors. Schoenfisch, A. L., Myers, D. J., Pompeii, L. A., & Lipscomb, H. J. (2011). *American journal of industrial medicine*, 54(12), 946-954.
- Implementation of safe patient handling in the US Veterans health system: A qualitative study of internal facilitators' perceptions. Elnitsky, C. A., Powell-Cope, G., Besterman-Dahan, K. L., Rugs, D., & Ullrich, P. M. (2015). *Worldviews on Evidence-Based Nursing*, 12(4), 208-216.  
[https://www.nursingcenter.com/ce\\_articleprint?an=00000446-201811000-00023](https://www.nursingcenter.com/ce_articleprint?an=00000446-201811000-00023)
- The Importance of Safe Patient Handling to Create a Culture of Safety: An Evidential Review. Humrickhouse, R., & Knibbe, H. J. (2016). *The Ergonomics Open Journal*, 9(1). <https://benthamopen.com/FULLTEXT/TOERGJ-9-27#>
- Impact of California's safe patient handling legislation on musculoskeletal injury prevention among nurses. Lee, S. J., Lee, J. H., & Harrison, R. (2019). *American Journal of industrial medicine*, 62(1), 50-58.
- Increase access to healthcare services with safe patient handling and mobility equipment. Yeung Y. *Am J SPHM*. 2015;5(4):104-147.
- Injury rates before and after the implementation of a safe resident handling program in the long-term care sector (2017). Kurowski, A., Gore, R., Roberts, Y., Kincaid, K. R., & Punnett, L. *Safety Science*, 92, 217-224.
- Interventions to reduce injuries when transferring patients: a critical appraisal of reviews and a realist synthesis. Thomas, D.R., Thomas, Y.L., 2014. *Int. J. Nurs. Stud.* 51, 1381e1394.
- Interventions to prevent and reduce the impact of musculoskeletal injuries among nurses: A systematic review. Richardson, A., McNoe, B., Derrett, S., & Harcombe, H. (2018). *International journal of nursing studies*, 82, 58-67.
- The influence of individual and organisational factors on nurses' behaviour to use lifting devices in healthcare. Koppelaar, E., Knibbe, J. J., Miedema, H. S., & Burdorf, A. (2013). *Applied ergonomics*, 44(4), 532-537.

- Implementation of a safe patient handling program in a multihospital health system from inception to sustainability: Successes over 8 years and ongoing challenges. Olinski, C., & Norton, C. E. (2017). *Workplace health & safety*, 65(11), 546-559.
- Improvements in patient handling for worker and patient safety. WorkSafe Victoria (WSV). (2018). McMillan, J., Moo, A., Newnam, S., & de Silva, A. The Institute of Safety, Compensation and Recovery Research (ISCRR) [https://www.iscrr.com.au/\\_data/assets/pdf\\_file/0004/1321771/Environmental-Scan-Improvements-in-patient-handling-for-worker-and-patient-safety.pdf](https://www.iscrr.com.au/_data/assets/pdf_file/0004/1321771/Environmental-Scan-Improvements-in-patient-handling-for-worker-and-patient-safety.pdf)
- Initial Results of an Evidence-Based Safe Patient Handling and Mobility Program to Decrease Hospital Worker Injuries. Przybysz, L., & Levin, P. F. (2017). *Workplace health & safety*, 65(2), 83-88.
- Integrating a standardized mobility program and safe patient handling. (2018). Dickinson, S., Taylor, S., & Anton, P. *Critical care nursing quarterly*, 41(3), 240-252.
- Investigating emergency nurses' beliefs and experiences with patient handling in the emergency department. (2021). Osborne, A. R., Connell, C., & Morphet, J. *Australasian Emergency Care*, 24(1), 49-54.
- Lifting and exertion injuries decrease after implementation of an integrated hospital-wide safe patient handling and mobilisation programme. Dennerlein, J. T., O'day, E. T., Mulloy, D. F., Somerville, J., Stoddard, A. M., Kenwood, C., ... & Hashimoto, D. (2016). *Occup Environ Med*, oemed-2015.
- Long-Term Effectiveness of "Zero-Lift Program" in Seven Nursing Homes and One Hospital. (1999). Arun Garg. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH), Cincinnati, OH. Contract No. U60/CCU512089-02
- Long-term efficacy of an ergonomics program that includes patient-handling devices on reducing musculoskeletal injuries to nursing personnel. Garg, A., & Kapellusch, J. M. (2012). *Human factors*, 54(4), 608-625.
- Multifactorial Strategies for Sustaining Safe Patient Handling and Mobility. Totzkay, D. L. (2018). *Critical care nursing quarterly*, 41(3), 340-344.
- Nurses and nursing assistants decision-making regarding use of safe patient handling and mobility technology: A qualitative study. (2018). Kanaskie, M. L., & Snyder, C. *Applied Nursing Research*, 39, 141-147.
- Occupational injuries for consecutive and cumulative shifts among hospital registered nurses and patient care associates: a case-control study. (2012). Hopcia K, Dennerlein JT, Hashimoto D, Orechia T, Sorensen G. *Workplace Health Saf*. 60(10):437-444.
- Outcomes of safe patient handling and mobilization programs: A meta-analysis. Teeple, E., Collins, J. E., Shrestha, S., Dennerlein, J. T., Losina, E., & Katz, J. N. (2017). *Work*, 58(2), 173-184
- Paradoxical impact of a patient-handling intervention on injury rate disparity among hospital workers. (2019). Sabbath, E. L., Yang, J., Dennerlein, J. T., Boden, L. I., Hashimoto, D., & Sorensen, G. *American journal of public health*, 109(4), 618-625
- Patient-Handling Injuries: Risk Factors and Risk-Reduction Strategies. Fragela et al. *American Nurse Today*, 11(5):40-43. 2016. <https://www.myamericannurse.com/wp-content/uploads/2016/05/Patient-Handling-Safety-426b.pdf>
- Prevalence of Safe Patient Handling Practice in US Acute Care Hospitals. Kayser, S., Wiggermann, N., Kumpar, D., & Hill-Rom, R. N. (2019, November). In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 63, No. 1, pp. 1073-1077). Sage CA: Los Angeles, CA: SAGE Publications. <https://www.myamericannurse.com/wp-content/uploads/2016/05/Patient-Handling-Safety-426b.pdf>
- Reducing incidence of low-back injuries reduces cost. (2001). Brophy, M.O., Achimore, L., & Moore-Dawson, J. *American Industrial Hygiene Journal*, 62(4), 508-11.
- Reduction in injury rates in nursing personnel through introduction of mechanical lifts in the workplace. (2003). Evanoff, B., Wolf, L., Aton, E., Canos, J., & Collins, J. *American Journal of Industrial Medicine*, 44, 451-457.



- Reducing Intensive Care Unit Staff Musculoskeletal Injuries with Implementation of a Safe Patient Handling and Mobility Program. Adamczyk, M. A. (2018). *Critical care nursing quarterly*, 41(3), 264-271.
- Reducing Musculoskeletal Injuries to Nursing Personnel. Garg, A & Kapellusch, J.M. *Human Factors* Vol. 54, No. 4, August 2012, pp. 608-625.
- Reduction of musculoskeletal injuries in intensive care nurses using ceiling-mounted patient lifts. Silverwood, S., & Haddock, M. (2006). *Dynamics*, 17, 19-21.
- Reducing Preventable Injuries Through the Safe Patient Handling and Mobility Program Bundle. (2020). Jones, D & Eaferton, G. *Int J SPHM*, 1(4), 134-138.
- Results of a pilot intervention to improve health and safety for healthcare workers. (2014). Caspi, C. E., Dennerlein, J. T., Kenwood, C., Stoddard, A. M., Hopcia, K., Hashimoto, D., & Sorensen, G. *Journal of Occupational and Environmental Medicine*, 55(12), 1449-1455.
- A review of patient lifting interventions to reduce health care worker injuries. Aslam, I., Davis, S. A., Feldman, S. R., & Martin, W. E. (2015). *Workplace health & safety*, 63(6), 267-275
- Safe Patient Handling Program - Gap Analysis Checklist 2018. Oregon Association of Hospitals and Health Systems (OAHS) Workplace Safety Initiative, 2018.  
<https://oahhs.org/assets/Safe%20Patient%20Handling/SPH%20Program%20Gap%20Analysis%20tool%20with%20survey%202018.pdf>
- Safe Patient Handling and Movement: A Literature Review. Mayeda-Letourneau, J. *Rehabilitation Nursing* 2014, 39, 123–129
- Safe patient handling program in critical care using peer leaders: lessons learned in the Netherlands. Knibbe, H. J., Knibbe, N. E., & Klaassen, A. J. (2007). *Critical Care Nursing Clinics of North America*, 19(2), 205-211.
- Safe patient handling behaviors and lift use among hospital nurses: A cross-sectional study. (2017). Lee, S. J., & Lee, J. H. *International journal of nursing studies*, 74, 53-60.
- Sample - Safe Patient Handling Observation Survey-Audit. Workplace Safety Initiative. Oregon Association of Hospitals and Health Systems (OAHS), 2014. [https://oahhs.org/assets/Safe%20Patient%20Handling/Worker-Safety\\_Sample-SPH-audit-with-patient-feedback.pdf](https://oahhs.org/assets/Safe%20Patient%20Handling/Worker-Safety_Sample-SPH-audit-with-patient-feedback.pdf)
- Sharing the Lessons: The 10-Year Journey of a Safe Patient Movement Program. Walker, I. et. al. *Int. Journal SPHM* 7(1)20-28.2017
- Successful Implementation of Ceiling-Mounted Lift Systems. Weinel, D. (2008). *Rehabilitation Nursing*, 33(2), 63-66.
- The Use of Lift Teams in Safe Patient Handling Programs – a Summary. Washington State Hospital Association, 2014.  
[http://www.wsha.org/wp-content/uploads/Competency\\_Guide\\_for\\_SPH\\_Champions.pdf](http://www.wsha.org/wp-content/uploads/Competency_Guide_for_SPH_Champions.pdf)
- Schoenfisch, A. L., Kucera, K. L., Lipscomb, H. J., McIlvaine, J., Becherer, L., James, T., & Avent, S. (2019). Use of Assistive Devices to Lift, Transfer, and Reposition Hospital Patients. *Nursing Research*, 68(1), 3-12.
- Using shared governance to achieve a culture change in safe patient handling. Gusenius, T. M., Decker, M. M., & Weidemann, A. G. (2018). *International journal of orthopaedic and trauma nursing*, 31, 35-39.
- Zero lift programs in small rural hospitals in Washington state: reducing back injuries among health care workers. (2006). Charney W, Simmons B, Lary M, Metz S. *AAOHN J.* 54(8):355-358.

## **SPHM & Workplace Violence**

A multi-component patient-handling intervention improves attitudes and behaviors for safe patient handling and reduces aggression experienced by nursing staff: A controlled before-after study. Risør, B. W., Casper, S. D., Andersen, L. L., & Sørensen, J. (2017). *Applied ergonomics*, 60, 74-82.

Consistent use of assistive devices for patient transfer is associated with less patient-initiated violence: cross-sectional study among health care workers at general hospitals. Pihl-Thingvad, J., Brandt, L. P., & Andersen, L. L. (2018). *Workplace health & safety*, 66(9), 453-461.

Safe lifting and movement of nursing home residents. Collins JW, Nelson A, [2006]. DHHS (NIOSH) Publication No. 2006-117. Cincinnati, OH: National Institute for Occupational Safety and Health.

The Role of Safe Handling and Mobilization in Reducing Type II Workplace Violence in Healthcare Settings. Kurowski A & El Ghaziri, M. CPH News and Views Issue #62. UMass Lowell, 2019. <https://www.uml.edu/Research/CPH-NEW/News/emerging-topics/News-views-62.aspx>

## **Bariatrics & SPHM**

### **Books:**

Among Giants: Courageous Stories of Those Who Are Obese and Those Who Care for Them. Dionne M. Lulu Press; 2006.

A Practical Guide to Bariatric Safe Patient Handling & Mobility. Gallagher, S. 2015. Visioning Publishers LLC, Sarasota, FL.

Special patient populations. Gallagher SM. In: Charney W, ed. *Epidemic of Medical Errors and Hospital-Acquired Infections*. Boca Raton, FL: CRC Press; 2012.

### **Toolkits:**

PtD-NIOSH Prevention Through Design. Published by VHA Center for Engineering & Occupational Safety and Health (CEOSH) St. Louis, Missouri July 2016 <http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm>

Obesity Prevention and Control – CDC <http://www.cdc.gov/workplacehealthpromotion/evaluation/topics/obesity.html>

Safe Patient Handling and Movement Program May 2008. Winnipeg Health Authority

<https://pdfs.semanticscholar.org/47c6/8fb058b4a3da97aa38ca8289fa4d1174ea16.pdf>

Guidelines for the Care of Hospitalized Patients with Bariatric Care Needs. (2018). Alberta Health Services, University of Alberta in collaboration with Obesity Canada. <https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-don-guidelines-for-hospitalized-patients-bariatric-needs.pdf>

### **Articles:**

Addressing the need for research on bariatric patient handling. Gallinsky T, Hudock S, Streit J. *Rehabilitation Nursing*, 35(6), 242-247.2010.

Associations between obesity and stress and shift work among nurses. Buss J. *Workplace Health Saf.* 2012 Oct;60(10):453-8.

Bariatric considerations in safe patient handling and movement (SPHM). Monaghan HM. *Director*. 2009;17(4):11-13.

- The bariatric patient and the unsupportive healthcare environment: an ethics analysis. Saucedo T, Falco K. *Am J SPHM*. 2014;4(1):52-56.
- Best practices for safe handling of the morbidly obese patient. McGinley LD, Bunke J. *Bariatric Nurs Surg Patient Care*. 2008;3(4):255-260.
- Caring for persons with bariatric health issues: a primer for the WOC nurse. Blackett A, Gallagher S, Dugan S, et al. *J Wound Ostomy Continence Nurs*. 2011;38(2):133-138.
- Caring for your Bariatric Patient: A Resource Guide to Literature on of the Morbidly Obese. Thiele et al. *Bariatric Nursing and Surgical Patient Care* 6 (1) 2011.
- Clinical outcomes for the obese hospital inpatient: An observational study. Fusco, K. L., Robertson, H. C., Galindo, H., Hakendorf, P. H., & Thompson, C. H. (2017). *SAGE Open Medicine*, 5: 1-6
- Developing a comprehensive bariatric protocol: A template for improving patient care. Arzouman, J. et al. *Medsurg Nursing* 15(1), 21-26.
- Essentials of a bariatric patient handling program. Muir M, Archer-Heese G. *Online J Issues Nurs*. 2009;14(1).
- Exploring the relationship between obesity, patient safety, and caregiver injury. Gallagher S. *Am J SPHM*. 2011;1(2):8-12.
- Evaluating equipment and techniques for safe perioperative positioning for the morbidly obese patient. Hunt, D. G. *Bariatric Nursing and Surgical Patient Care*, 2(1), 57-63.
- Exploring Perceptions of Barriers, Facilitators, and Motivators to Physical Activity Among Female Bariatric Patients: Implications for Physical Activity Programming. Dikareva, A. et. al. *American Journal of Health Promotion*, Sep2016; 30(7): 536-544.
- Handle with care: bariatric equipment protects you and your patients from injury. Carlson, A. *Rehab Management*. November 7, 2008. <http://www.rehabpub.com/2008/11/handle-with-care/>.
- Hospital rehabilitation for patients with obesity: a scoping review. Seida, J.C et. al. *DISABIL REHABIL*, Jan 2018; 40(2): 125-134. (10p)
- Manual handling risks associated with the care, treatment and transportation of bariatric patients and clients in Australia. Cowley SP, Leggett S. *Int J Nurs Pract*. 2010;16(3):262-267.
- Manual handling risks in the bariatric (obese) patient pathway in acute sector, community and ambulance care and treatment. Hignett S, Griffiths P. *Work*. 2009;33(2):175-180.
- Maximizing healthcare provider safety while rehabilitating the bariatric patient. Whipple KL. *Bariatric Nurs Surg Patient Care*. 2008;3(1):41.
- Mobilization of the obese patient and prevention of injury. Walden CM, et. al. *Ann Surg*. 2013 Oct;258(4):646-50; discussion 650-1.
- A Model for the Sensitive Treatment of the Bariatric Patient. Bejiciy, SM. *R-E-S-P-E-C-T: Bariatric Nursing and Surgical Patient Care*. March 2008, 3(1): 47-56.
- Moving the bariatric patient. (2018). Gillespie, T., & Lane, S. *Critical care nursing quarterly*, 41(3), 297-301.
- Nurses' Perceptions of Safety Concerns When Caring for Morbidly Obese Patients. M.A, et. al. *Bariatric Nursing and Surgical Patient Care*. Sep 2010: 243-247.
- Nursing Care of the Bariatric Patient. Camden, SG. *Bariatric Nursing and Surgical Patient Care*. Spring 2006, 1(1): 21-30.
- Nursing care of the super bariatric patient: challenges and lessons learned. Broome, C. A et. al. (2015). *Rehabilitation Nursing*, 40(2), 92-99.

Overcoming barriers to mobilizing bariatric patients: three case studies. Arnold M, Combs J, Gach R, Labreche M. Am J SPHM. 2015;5(2):47-54.

Physical Therapists' Ways of Talking About Overweight and Obesity: Clinical Implications. Setchell J, Watson BM, Gard M, Jones L. Physical Therapy, 2016; 96

Promoting dignity and preventing caregiver injury while caring for a morbidly obese woman with skin tears and a pressure ulcer. Camden SG, Shaver J, Cole K. Bariatr Nurs Surg Patient Care. 2007;2(1):77-82.

Putting People First In Obesity. Kyle, T., Puhl, R. Epidemiology/Genetics. 2014; 1.

R-E-S-P-E-C-T: A Model for the Sensitive Treatment of the Bariatric Patient. Bejiciy, SM. Bariatric Nursing and Surgical Patient Care. March 2008, 3(1): 47-56.

Risk Assessment and Process Planning for Bariatric Patient Handling Pathways. Hignett, S., Chipchase, S., Tetley, A., Griffiths, P. Health and Safety Executive. 2007 <http://www.hse.gov.uk/research/rrhtm/rr573.htm>

Risks to Healthcare Organizations and Staff Who Manage Obese (Bariatric) Patients and Use of Obesity Data to Mitigate Risks: A Literature Review. (2021). McClean, K., Cross, M., & Reed, S. Journal of Multidisciplinary Healthcare, 14, 577.

Safe patient handling and movement: bariatric considerations. Gallagher S, Hilton T, Monaghan HM, Muir M, Dye A. Am J SPHM. 2014;4(2):S1-S16.

Safe patient handling of the bariatric patient: sharing of experiences and practical tips when using bariatric algorithms. Muir M, Heese GA. Bariatr Nurs Surg Patient Care. 2008;3(2):147-158.

Special Considerations for Care of Obese Patients Victoria General Hospital.

[http://www.wrha.mb.ca/professionals/safety/files/SafePatientHandling/VGH\\_SpecialConsiderationsforCareofObesePatientfinalApril42014.pdf](http://www.wrha.mb.ca/professionals/safety/files/SafePatientHandling/VGH_SpecialConsiderationsforCareofObesePatientfinalApril42014.pdf)

Technology Resource Guide for Bariatric Patients & Tools for Bariatric SPH programs & Bariatric Algorithms. [www.visn8.med.va.gov/patientsafetycenter](http://www.visn8.med.va.gov/patientsafetycenter)

The safe patient handling needs of a bariatric patient: one size does not fit all. Delmore B, Stolfi A, Garritan SL, et al. Am J SPHM.2011;1(4):31-36.

Women's health, size, and safe patient handling: what are the ethical issues? Gallagher S. Bariatr Nurs Surg Patient Care. 2011;6(2):69-72.

Work-related musculoskeletal risks associated with nurses and nursing assistants handling overweight and obese patients: A literature review. Choi, S. D., & Brings, K. (2016). Work, 53(2), 439-448.

### **SPHM Long-Term Care**

Bringing a structural perspective to work: Framing occupational safety and health disparities for nursing assistants with work-related musculoskeletal disorders (2018). Haas, A. D., Hunter, D. A., & Howard, N. L. Work, 59(2), 211-229.

Caring for Obese Individuals in the Long-Term Care Setting. Bradway, C et. al. Annals of Long-Term Care 17(7)

Differences among nursing homes in outcomes of a safe resident handling program. (2012). Kurowski, A., Gore, R., Buchholz, B., & Punnett, L. Journal of Healthcare Risk Management, 32(1), 35-51.

Effects of a National Safe Patient Handling Program on Nursing Injury Incidence Rates. Powell-Cope, G et. al. JONA Volume 44, Number 10, pp 525-534.

Exploring the Synergic Effects of Nursing Home Work on Work-Related Musculoskeletal Disorders Among Nursing Assistants. Ching, S. S., Szeto, G., Lai, G. K. B., Lai, X. B., Chan, Y. T., & Cheung, K. (2018). Workplace health & safety, 66(3), 129-135.

Guidelines for Nursing Homes: Ergonomics for the Prevention of Musculoskeletal Disorders. (2003 rev. 2009) Occupational Safety and Health Administration (OSHA), 2009.

[https://www.osha.gov/ergonomics/guidelines/nursinghome/final\\_nh\\_guidelines.html](https://www.osha.gov/ergonomics/guidelines/nursinghome/final_nh_guidelines.html)

Impact of a safe resident handling program in nursing homes on return-to-work and re-injury outcomes following work injury. (2019). Kurowski, A., Pransky, G., & Punnett, L. *Journal of occupational rehabilitation*, 29(2), 286-294.

Implementation of participatory organizational change in long term care to improve safety. (2021). Van Eerd, D., D'Elia, T., Ferron, E. M., Robson, L., & Amick III, B. *Journal of Safety Research*.

Increasing the Use of Patient Lifting Devices in Nursing Homes: Identifying the Barriers and Facilitators Affecting the Different Adoption Stages for an Ergonomics Intervention. Park, S. et. al. *Int J SPHM* (8)1: 9-24.2018.

Injury rates before and after the implementation of a safe resident handling program in the long-term care sector (2017). Kurowski, A., Gore, R., Roberts, Y., Kincaid, K. R., & Punnett, L. *Safety Science*, 92, 217-224.

The Link between Safe Patient Handling and Patient Outcomes in Long-Term Care. (2008). Nelson, A., Collins, J., Siddharthan, K., Matz, M., & Waters, T. *Rehabilitation Nursing*, Vol. 33 No. 1, 33-43.

The miracle of lifting technology. Joliff, J. (2006). *Nursing Homes*.

Long Term Care Interest Group. Website with Multiple Resources. Association for Safe Patient Handling Professionals (ASPHP). <https://asphp.org/long-term-care-interest-group/>

Medical Cost of Workers' Compensation Claims Related to Patient Handling and Mobility Tasks Within Skilled Nursing Facilities, Continuing Care Retirement Communities and Assisted Living Facilities: An Exploratory Analysis. (2020). Pieretti, L. F., Sylvester, R. A., & Siegfried, K. V. *Journal of Occupational and Environmental Medicine*, 62(12), e738.

Nursing home perspectives on the admission of morbidly obese patients from hospitals to nursing homes. Felix, H. C., Bradway, C., Ali, M. M., & Li, X. (2016). *Journal of Applied Gerontology*, 35(3), 286-302.

Nurses and nursing assistants decision-making regarding use of safe patient handling and mobility technology: A qualitative study. Kanaskie, M. L., & Snyder, C. (2018). *Applied Nursing Research*, 39, 141-147.

Nursing home employee and resident satisfaction and resident care outcomes (2018). Plaku-Alakbarova, B., Punnett, L., Gore, R. J., & Procare Research Team. *Safety and health at work*, 9(4), 408-415.

Occupational differences in workers' compensation indemnity claims among direct care workers in Minnesota nursing homes, 2005-2016. (2020). Rosebush, C. E., Zaidman, B., Schofield, K. E., Erickson, D. J., Ramirez, M., Tschida, B., & McGovern, P. M. *American journal of industrial medicine*, 63(6), 517-526.

Patient handling in the Veterans Health Administration: facilitating change in the health care industry. Hodgson M, Matz MW, Nelson A. *JOEM*. 2013; 55(10):1230-1237.

Prevalence of musculoskeletal disorders for nurses in hospitals, long-term care facilities, and home health care: a comprehensive review (2015). Davis, K. G., & Kotowski, S. E *Human factors*, 57(5), 754-792.

Safe lifting and movement of nursing home residents. Collins JW, Nelson A, and Sublet [2006]. DHHS (NIOSH) Publication No. 2006-117. Cincinnati, OH: National Institute for Occupational Safety and Health.

<http://www.cdc.gov/niosh/docs/2006-117/>

Safe Patient Handling: Preventing Musculoskeletal Disorders in Nursing Homes. Occupational Safety and Health Administration (OSHA), 2012. <https://www.osha.gov/Publications/OSHA3708.pdf>

Safe Patient Handling & Movement: Long Term Care. Heather M.; Murray, Esther; Severson, Lori; Kissing, Jackie; *American Journal of Safe Patient Handling & Movement*, Sep2013 Supplement; 3 S1-S19.

Sit-stand mechanical lifts in long-term care and resident quality indicators. Gucer PW, Gaitens J, Oliver JM, McDiarmid MA. *J Occup Environ Med*. 2013;55(1):36-44.

Survey to Investigate the Status of Safe Patient Handling Programs in Acute Care and Safe Resident Handling Programs in Long Term Care facilities in Oregon. 2010, The Oregon Coalition for Health Care Ergonomics. [www.hcergo.org](http://www.hcergo.org)

The Role of Safe Handling and Mobilization in Reducing Type II Workplace Violence in Healthcare Settings. Kurowski A & El Ghaziri, M. CPH News and Views Issue #62. UMass Lowell, 2019. <https://www.uml.edu/Research/CPH-NEW/News/emerging-topics/News-views-62.aspx>

Use of resident handling equipment by nursing aides in long-term care: associations with work organization and individual level characteristics. (2016). Kurowski, A., Gore, R., Mpolla, N., & Punnett, L. Am J Safe Patient Handl Mov, 6, 16-24.

Worker injuries in nursing homes: is safe patient handling legislation the solution?. (2016). Lapane, K. L., Dubé, C. E., & Jesdale, B. M. The journal of nursing home research sciences, 2, 110.

Workplace hazards faced by nursing assistants in the United States: a focused literature review. Walton, A., & Rogers, B. (2017). International journal of environmental research and public health, 14(5), 544.

### **SPHM Home Health**

Healthcare Workers – Home Health. Website with Multiple Resources. National Institute for Occupational Safety and Health (NIOSH). <https://www.cdc.gov/niosh/topics/healthcare/homehealthcare.html>

Home-based direct care workers: Their reported injuries and perceived training knowledge. (2016). Hamadi, H., Probst, J. C., Khan, M. M., Bellinger, J., & Porter, C. Workplace health & safety, 64(6), 249-261.

Home care and home support worker safety: A scoping review. (2018). Heather McLean, B. A. Perspectives, 40(1), 18-26.

Home Healthcare. Website with Multiple Resources. The Occupational Safety and Health Administration (OSHA). <https://www.osha.gov/home-healthcare>

Identifying the Risks of the Working Environment of Home Based-Care Workers. (2016). Howard, N. Am journal SPHM 6(4), 166-170.

Injury among home care workers in Washington State. (2018). Hansell, A. K., Knaster, E. S., & Phillips, L. E. New solutions: a journal of environmental and occupational health policy, 27(4), 543-558.

Prevalence of musculoskeletal disorders for nurses in hospitals, long-term care facilities, and home health care: a comprehensive review (2015). Davis, K. G., & Kotowski, S. E Human factors, 57(5), 754-792.

Saving our Backs: Safe Patient Handling and Mobility for Home Care Beauvais, A., & Frost, L. Home Healthcare Now, 32(7), 430-434. 2014. <https://nursing.ceconnection.com/ovidfiles/00004045-201407000-00008.pdf>

Safety risks associated with physical interactions between patients and caregivers during treatment and care delivery in Home Care settings: A systematic review. (2016). Hignett, S., Otter, M. E., & Keen, C. International journal of nursing studies, 59, 1-14.

The Unique Occupational Environment of the HomeHealthcare Worker. (September 29, 2020 ) Bien, E & Smith, R. NIOSH Science Blog. <https://blogs.cdc.gov/niosh-science-blog/2020/09/29/hhcws/>

Using a Mechanical Lift at Home. (2021). Fields, B. E., Whitney, R. L., & Bell, J. F. AJN The American Journal of Nursing, 121(2), 57-62.

## **SPHM and Patient Safety General Information**

Cost effect of patient education for the prevention of falls in hospital: economic evaluation from a randomized controlled trial (2013). Haines, T.P. et al. BMC Medicine. 11:135-148.

Effect of a Patient-Repositioning Device in an Intensive Care Unit on Hospital-Acquired Pressure Injury Occurrences and Cost. (2017). Edger, M. Journal of Wound, Ostomy and Continence Nursing, 44(3), 236-240.

Evaluation of a patient-centered fall-prevention tool kit to reduce falls and injuries: a nonrandomized controlled trial. (2020). Dykes, P. C., Burns, Z., Adelman, J., Benneyan, J., Bogaisky, M., Carter, E., ... & Bates, D. W. JAMA network open, 3(11), e2025889-e2025889. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2773051>

Estimating the Additional Hospital Inpatient Cost and Mortality Associated With Selected Hospital-Acquired Conditions. Content last reviewed November 2017. Agency for Healthcare Research and Quality, Rockville, MD.

<https://www.ahrq.gov/hai/pfp/haccost2017-results.html>

Evidence-Based Prevention of Pressure ulcers in the Intensive Care Unit (2013). Cooper K. Crit Care Nurse 2013; 33(6): 57-67.

Falls Among Adult Patients Hospitalized in the US. Prevalence and Trends (2013). Bouldin EL, Andresen EM, Dunston NE, Simon M, Waters TM, Liu M, Daniels MJ, Mion LC, Shorr RI.: J Patient Safety 2013 (Mar). 9(1): 13-7.

Falls Data Cost of Older Adult Falls. Page last reviewed: September 17, 2019 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. <https://www.cdc.gov/homeandrecreationalafety/falls/fallcost.html> accessed July 2019

Fall prevention and bathroom safety in the epilepsy monitoring unit. Spritzer, S. D., Riordan, K. C., Berry, J., Corbett, B. M., Gerke, J. K., Hoerth, M. T., ... & Noe, K. H. (2015). Epilepsy & Behavior, 48, 75-78.

Hospital-acquired pressure ulcers: Results from the national Medicare Patient Safety Monitoring System study (2012). Lyder, et al. J Am Geriatr Soc. 2012 Sep;60(9):1603-8.

Hospital-Based Fall Program Measurement and Improvement in High Reliability Organizations (2013). Quigley P, & White S. Online Journal of Issues in Nursing, 2013(May). 18(2): Manuscript 5.

Implications for patient safety in the use of safe patient handling equipment: A national survey. Elnitsky, C. A., Lind, J. D., Rugs, D., & Powell-Cope, G. (2014). International journal of nursing studies, 51(12), 1624-1633

Improvements in patient handling for worker and patient safety. (2018). McMillan, J., Moo, A., Newnam, S., & de Silva, A. WorkSafe Victoria (WSV). The Institute of Safety, Compensation and Recovery Research (ISCRR).

[https://www.iscrr.com.au/\\_data/assets/pdf\\_file/0004/1321771/Environmental-Scan\\_Improvements-in-patient-handling-for-worker-and-patient-safety.pdf](https://www.iscrr.com.au/_data/assets/pdf_file/0004/1321771/Environmental-Scan_Improvements-in-patient-handling-for-worker-and-patient-safety.pdf)

Integrating Mobility & Falls Prevention Programs. Bill Hirschuber, Park Nicollet Health Services. Proceedings SPHM conference East 2013

Interaction of health care worker health and safety and patient health and safety in the US health care system: recommendations from the 2016 summit. Loepke, R., Boldrighini, J., Bowe, J., Braun, B., Eggins, E., Eisenberg, B. S., ... & Kapp, E. A. (2017). Journal of occupational and environmental medicine, 59(8), 803-813. <https://acoem.org/Guidance-and-Position-Statements/Joint-Statements-Summit-Recommendations-Proceedings/Interaction-of-Health-Care-Worker-Health-and-Patient-Health-and-Safety-in-the-US-Health-Care-System>

The Link between Safe Patient Handling and Patient Outcomes in Long-Term Care. Nelson, A., Collins, J., Siddharthan, K., Matz, M., & Waters, T. Rehabilitation Nursing, Vol. 33 No. 1, 33-43.

Linking worker health and safety with patient outcomes. (2017). Gibson, K., Costa, B., & Sampson, A. WorkSafe Victoria (WSV). The Institute of Safety, Compensation and Recovery Research (ISCRR).

[http://www.iscrr.com.au/data/assets/pdf\\_file/0006/1321719/Evidence-Review Linking-worker-health-and-safety-with-patient-outcomes.pdf](http://www.iscrr.com.au/data/assets/pdf_file/0006/1321719/Evidence-Review Linking-worker-health-and-safety-with-patient-outcomes.pdf)

Patient safety and comfort during transfers in relation to nurses' work technique. Kjellberg, K., Lagerström, M., & Hagberg, M. (2004). *Journal of advanced nursing*, 47(3), 251-259.

Mitigating adverse events with patient handling equipment: a photo-narrative project. *Am. J. Safe Patient Handling*. Rugs, D., Elnitsky, C., Lind, J., Powell-Cope, G., 2012. *Mov.* 2(4), 112–118.

NPUAP-EPUAP-PPPIA Pressure Ulcer treatment & Prevention 2014 Quick Reference Guide. European Pressure Ulcer Advisory Panel (2014). <http://www.epuap.org/pu-guidelines/#2014guidelines&qrg>

National Guideline Clearing House for Pressure Ulcer Prevention. AHRQ  
<http://www.guideline.gov/syntheses/synthesis.aspx?id=25078>

Pan Pacific clinical practice guideline for the prevention and management of pressure injury. Australian Wound Management Association. (2012). Osborne Park, WA: Cambridge Media, 1-124.

Preventing Pressure Ulcers in Hospitals: A Toolkit for Improving Quality of Care. AHRQ. 2011.

<http://www.ahrq.gov/professionals/systems/long-term-care/resources/pressure-ulcers/pressureulcertoolkit/index.html>

Preventing Falls in Hospitals A Toolkit for Improving Quality of Care. AHRQ Publication No. 13-0015-EF 2013.

<http://www.ahrq.gov/professionals/systems/long-term-care/resources/injuries/fallpxtoolkit/index.html>

Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. The International Guideline, 3rd Edition (2019). [European Pressure Ulcer Advisory Panel \(EPUAP\)](#), [National Pressure Injury Advisory Panel \(NPIAP\)](#), and the [Pan Pacific Pressure Injury Alliance \(PPPIA\)](#). <http://www.internationalguideline.com/>

Redesigning a Fall Prevention Program in Acute Care: Building on Evidence. Fridman, V. (2019). *Clinics in geriatric medicine*, 35(2), 265-271.

Safe Patient Handling and Patient Safety: Identifying the current evidence base and gaps in research. Enos.L. *American Journal of Safe Patient Handling and Movement*, 3, (3): 94-102.

Sit-stand mechanical lifts in long-term care and resident quality indicators. Gucer PW, Gaitens J, Oliver JM, McDiarmid MA. *J Occup Environ Med.* 2013;55(1):36-44.

The economic and clinical impact of an early mobility program in the trauma intensive care unit: a quality improvement project. (2020). Falkenstein, B. A., Skalkowski, C. K., Lodise, K. D., Moore, M., Olkowski, B. F., & Rojavin, Y. *Journal of Trauma Nursing | JTN*, 27(1), 29-36.

The Extra Resource Burden of In-Hospital Falls: A cost of falls study ( 2015). Morello RT, Barker AL, Watts JT, Haines T, Zavarsek SS, Hill KD, Brand C, Sherington C, Wolfe R, Bohensky MA, Stoelwinder JU. *MJA* 2015. 203(9); 367.e1-367.e8. 11

### **Missed Nursing Care**

**Book:** Errors of Omission How Missed Nursing Care Imperils Patients. Kalisch, B. ANA 2015

Associations between rationing of nursing care and inpatient mortality in Swiss hospitals. M. Schubert et al. *Quality in Health Care* 2012; pp. 1–9. *International Journal for Quality in Health Care Advance Access* published March 28, 2012

Comparing two identification methods of missed nursing care. Deborrah Jane Wegmann. TEXAS WOMAN'S UNIVERSITY, 2011, 210 pages; 3480880 (dissertation) <http://gradworks.umi.com/34/80/3480880.html>

Correlates and predictors of missed nursing care in hospitals. (2017). Bragadóttir, H., Kalisch, B. J., & Tryggvadóttir, G. B. *Journal of clinical nursing*, 26(11-12), 1524-1534.



- Development and psychometric testing of a tool to measure missed nursing care. Kalisch BJ, Williams R.A. *J Nurs Adm.* 2009 May;39(5):211-9.
- Errors of Omission: Missed Nursing Care. Beatrice Kalisch, PhD, RN, FAAN. NCSBN Annual Institute of Regulatory Excellence Conference. Clearwater Beach, FL. January 25, 2017. [https://www.ncsbn.org/2017IRE\\_BKalisch.pdf](https://www.ncsbn.org/2017IRE_BKalisch.pdf)
- The impact of teamwork on missed nursing care. Beatrice J. Kalisch, RN, and Kyung Hee Lee. *Nursing Outlook* 2010 Sep-Oct;58(5):233-41.
- The impact of the nursing practice environment on missed nursing care. (2015). Hessels, A. J., Flynn, L., Cimiotti, J. P., Cadmus, E., & Gershon, R. R. *Clinical nursing studies*, 3(4), 60.
- Impact of Patient Safety Culture on Missed Nursing Care and Adverse Patient Events. Hessels, A. J., Paliwal, M., Weaver, S. H., Siddiqui, D., & Wurmser, T. A. (2019). *Journal of nursing care quality*, 34(4), 287-294.
- Missed nursing care: errors of omission. Kalisch BJ, Landstrom G, Williams RA. *Nurs Outlook*. 2009 Jan-Feb;57(1):3-9.
- Missed nursing care: a concept analysis. Kalisch, B.J., et al. *Journal of Advanced Nursing* 65(7), 1509–1517
- Missed Nursing Care AHRQ PSNet Patient Safety Primer 2015, Updated Sept. 2019, <https://psnet.ahrq.gov/primer/missed-nursing-care>
- Missed nursing care: Magnet versus non-Magnet hospitals. Beatrice J. Kalisch, and Kyung Hee Lee. *Nursing Outlook* 2012 Sep-Oct;60(5):e32
- Missed nursing care: a qualitative study. Kalisch B. *Nurs Care Qual.* 2006;21(4):306-13.
- Missed nursing care: View from the hospital bed (Part Two) Kalisch, B. *Reflections of Nursing Leadership Sigma Theta Tau*. Published 7/26/2010, Vol. 36, No. 3 Retrieved from [http://www.reflectionsonnursingleadership.org/pages/vol36\\_3\\_kalisch\\_parttwo.aspx](http://www.reflectionsonnursingleadership.org/pages/vol36_3_kalisch_parttwo.aspx)
- Missed Nursing Care, Staffing, and Patient Falls. B.J.Kalisch et al. *Journal of Nursing Care Quality: January/March 2012 - Volume 27 - Issue 1 - p 6–12*
- Missed nursing care is linked to patient satisfaction: a cross-sectional study of US hospitals. (2016). Lake, E. T., Germack, H. D., & Viscardi, M. K. *BMJ Qual Saf*, 25(7), 535-543.
- Missed care from the patient's perspective—a scoping review. (2020). Gustafsson, N., Leino-Kilpi, H., Prga, I., Suhonen, R., & Stolt, M. *Patient preference and adherence*, 14, 383.
- Outcomes of inpatient mobilization: a literature review. (2014). Kalisch, B. J., Lee, S., & Dabney, B. W. *Journal of clinical nursing*, 23(11-12), 1486-1501.
- Quality caring in nursing: Applying theory to clinical practice, education, and leadership. Duffy, J. R. (2009). New York: Springer. [http://www.springerpub.net/samples/9780826121288\\_chapter.pdf](http://www.springerpub.net/samples/9780826121288_chapter.pdf)
- Registered nurse perspectives on delayed or missed nursing care in a New Zealand hospital. Rosie Winters, & Stephen Neville. *Nursing Praxis in New Zealand* 2012. ISSN:0112-7438
- The association between nurse staffing and omissions in nursing care: a systematic review. (2018). Griffiths, P., Recio-Saucedo, A., Dall'Ora, C., Briggs, J., Maruotti, A., Meredith, P., ... & Missed Care Study Group. *Journal of advanced nursing*, 74(7), 1474-1487.

## **SPHM - Mobility Assessment**

Banner Mobility Assessment Tool for Nurses: Instrument Validation. Boynton, T., Kelly, L., Perez, A., Miller, M., An, Y., & Trudgen, C. Am. J. SPHM, 4(3), 86-92.

The Bedside Mobility Assessment Tool 2.0 (2020) Boynton, T., et. al. American Nurses Today 15(7), 18-22.  
AORN <https://www.myamericannurse.com/wp-content/uploads/2020/06/an7-Mobility-618.pdf>

Banner Mobility Assessment Tool can be found at [http://www.americannursetoday.com/wp-content/uploads/2014/09/ant9-Patient-Handling-Supplement-821a\\_Implementing.pdf](http://www.americannursetoday.com/wp-content/uploads/2014/09/ant9-Patient-Handling-Supplement-821a_Implementing.pdf)

and <https://www.youtube.com/watch?v=vqkw13Ucpg8>

Clinical instruments for bedside functional assessment: Convergent validity among the AM-PAC '6-Clicks' and BMAT. (2021). Lininger, M. R., Warren, M., Knecht, J., Verheijde, J., Tyler, B., & Tompkins, J. Journal of Clinical Nursing. 30(13-14), 2048-2056.

Get up and Go' or 'Timed Up and Go' <http://www.mnfallsprevention.org/professional/assessmenttools.html>  
<https://www.aan.com/Guidelines/home/GetGuidelineContent/273>

Guideline for Safe Patient Handling and Movement. In Guidelines for Perioperative Practice. Denver, CO: AORN, Inc; 2021. (For purchase). <https://aornguidelines.org/guidelines/content?sectionid=192587418&view=book>

Introducing the Egress test: a simple screen tool to predict safety of bariatric patient transfers. Dionne, M. (2004). Phys Ther Rehab Med, 15, 39.

A Pilot Study Evaluating Physical Therapist-Nurse Inter-Rater Reliability of Dionne's Egress Test in Morbidly Obese Patients. Smith, B. K. (2008). Acute Care Perspectives, 17(4).

Safe Patient Handling and Mobility Guidebook Center for Engineering & Occupational Safety and Health (CEOSH), Veterans Affairs, 2016. <http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm>

Safe Patient Handling and Mobility Check. Enos 2013. [www.hcergo.org](http://www.hcergo.org) or email Lynda at [humanfit@aol.com](mailto:humanfit@aol.com) for other versions.

Safe Patient Handling Algorithms. National Association of Orthopedic Nurses (NAON), 2016. (For Purchase)  
<http://www.orthonurse.org/p/bl/et/blogaid=926>.

Scoring System Helps Choose Approaches and Devices for Safely Moving Patients, Leading to Fewer Staff Injuries and Lost Work Days. Agency for Healthcare Research and Quality 2012. <https://innovations.ahrq.gov/profiles/scoring-system-helps-choose-approaches-and-devices-safely-moving-patients-leading-fewer>

The VA Safe Patient Handling and Mobility Mobile App for HealthCare Professionals, Veterans and families. US Dept. of Veterans Affairs. <https://mobile.va.gov/app/safe-patient-handling>

## **Rehabilitation, Therapy and SPHM**

The American Physical Therapy Association (APTA) <http://www.apta.org/SafePatientHandling/>

APTA White Paper

- Improving Patient and Health Care Provider Safety: Task Force Develops Recommendations on Patient Handling (2004). The American Physical Therapy Association (APTA)
- 2012 The American Physical Therapy Association (APTA) updates their Safe Patient Handling position statement
- Physical Therapist And Physical Therapist Assistants In Safe Patient Handling And Mobility. HOD P06-19-24-10. APTA's position statement on safe patient handling and mobility, 2019. <https://www.apta.org/apta-and-you/leadership-and-governance/policies/pt-and-pta-safe-patient-handling>

APTA Education - Safe Patient Handling and Movement: Guidance for Health Care Workers Learning Center Online Course (0.25 CEUs)

Advantages of using ceiling mounted lifts in acute stroke rehabilitation. Halbert R, Pearch T, Burgess R, et al. JACPT. 2013;4(2):73-83.

A systematic review of safe patient handling and mobility programs to prevent musculoskeletal injuries in occupational and physical therapists and assistants. (2016). Harwood, K., Darragh, A. R., Campo, M., Rockefeller, K., & Scalzetti, D. A. Int J SPHM, 8(1), 46-56.

Changes in functional independence measure ratings associated with a safe patient handling and movement program. M. Arnold et al. Rehabilitation Nursing 2011 Jul-Aug; 36 (4): 138-44.

Changing manual-handling practice in a stroke rehabilitation unit . Mutch, K. Professional Nurse. 19(7): 374-378.

Comparative kinematic and electromyographic assessment of clinician- and device- assisted sit-to-stand transfers in patients with stroke. Bumfield J et al. Phys Ther. 2013;93(10): 1331-1341.

Do active assist transfer devices improve transfer safety for patients and caregivers in hospital and community settings? A scoping review. (2020). Tang, K., Diaz, J., Lui, O., Proulx, L., Galle, E., & Packham, T. Disability and Rehabilitation: Assistive Technology, 15(6), 614-624

Do student physical therapists learn and practice safe patient handling in entry-level physical therapy education programs? Stevenson J, Hecksel K, Deneau K, Dudley B. Am J SPHM. 2011;1(4):8-16.

Effect of a safe patient handling program on rehabilitation outcomes. M. Campo.et. al. Arch Phys Med Rehabil. 2013 Jan;94(1):17-22

Handle with Care: Today's PTs have more options than ever for safe patient transfers. Hinesly, D. Physical Therapy Products, June 2006.

Hospitalization-Associated Disability: "She was probably able to ambulate, but I'm not sure". Covinsky K, Peirluissi E, Johnston C. JAMA. 2011;306(16):1782-1793.

Implementing a Safe Patient Handling and Movement Program in a Rehabilitation Setting. Saracino, S., Schwartz, S., and Pilch, E. Pa Patient Saf Advis 2009 Dec;6(4):126-31

Is there a Role for Gait Belts in Safe Patient Handling and Movement Programs? (2011). Rockefeller, K. & Proctor, R. American Journal of Safe Patient Handling and Movement. (1)1:30-34. New Jan 2013

Integrating patient handling equipment into physical therapy activities in a rehabilitation setting a case series. Mcilvane et al. AJSPHM 2011 Sept vol 1:3 p 16:22

Myths and Facts about Safe Patient Handling in Rehabilitation. Nelson, A, Harwood, K.J., Traclely, C., Dunn, K.L. (2008). Rehabilitation Nursing, 33(1), 10-17.

Nurse staffing and patient outcomes in inpatient rehabilitation settings. A. Nelson et al. Rehabil Nurs. 2007;32(5):179-202.

Patient Transfer Equipment: Lift systems and products that improve PT and patient safety. DiIulio, R. Physical Therapy Products, March 2007.

Physical therapist-established intensive care unit early mobilization program: Quality improvement project for critical care at the University of California San Francisco Medical Center. Engel HJ, Talebe S, Alonzo PB, Mustille RL, & Rivera MJ. Phys Ther. 2013;93(7):1-12.

Recommendations for Turning Patients With Orthopaedic Impairment. Gonzalez, C.M., et al. Orthopaedic Nursing 28(s2):S9-S12.

Recommendations for Vertical Transfer of a Postoperative Total Hip Replacement Patient (Bed to Chair, Chair to Toilet, Chair to Chair, or Car to Chair. Gonzalez, C.M., et al. Orthopaedic Nursing 28(s2):S13-S17.

- Safe ambulation of an orthopaedic patient. S.M Radawiec et al. *Orthop Nurs* 2009 Mar-Apr; 28(2)(Suppl S):S24-S27
- Safe Patient Handling in Rehabilitation. Nelson, A, Harwood, K.J., Traclely, C., Dunn, K.L. (2008). *Rehabilitation Nursing*, 33(1), 10-17.
- Safe-patient-handling equipment in therapy practice: implications for rehabilitation. A.R. Darragh et al. *Am J Occup Ther* 2013 Jan-Feb; Vol. 67 (1), pp. 45-53.
- Safe patient handling from a physical therapy perspective. Waters T, Rockefeller K. *Rehabil Nurse* 2010; 35(5):216-222 .
- Safe Patient Movement for Therapists: An "out-of-the-box" mobility spin with an old device. Zinnecker, L. *Rehab Management*, July 2007.
- Safe Vertical Transfer of Patient With Extremity Cast or Splint. Patterson, M et al. *Orthopaedic Nursing* 28: s18-s23.
- Therapy practice within a minimal lift environment: perceptions of therapy staff. Darragh A, Campo M, Olson D. *Work*. 2009;33(3):241 -253.
- The use of safe patient handling and mobility equipment in rehabilitation. (2020). Rugs, D., Powell-Cope, G., Campo, M., Darragh, A., Harwood, K., Kuhn, J., & Rockefeller, K. *Work*, 66(1), 31-40
- Using Technology to Promote Safe Patient Handling and Rehabilitation. Rockeffella, K. *Rehabilitation Nursing*, (33)1: 2-9.
- Validity of the AM-PAC "6-clicks" inpatient daily activity and basic mobility short forms. Jette D, Stilphen M, Ranganathan V, Passek, Frost F, Jette A. *Phys Ther*. 2014; 94(3):379-391.
- Weighty Matters: Supplying rehabilitation services for a growing number of bariatric patients. Paleg, G. *Rehab Management*, October 2007.

### **Early Mobilization**

- Assisted early mobility for hospitalized older veterans: preliminary data from the STRIDE program. (2014). Hastings, S. N., Sloane, R., Morey, M. C., Pavon, J. M., & Hoenig, H. *Journal of the American Geriatrics Society*, 62(11), 2180-2184.
- Average hospital expenses per inpatient day across 50 states. Becker's Hospital CFO Report. January 4th, 2019. <https://www.beckershospitalreview.com/finance/average-hospital-expenses-per-inpatient-day-across-50-states.html>
- Barriers and strategies for early mobilization of patients in intensive care units. (2016). Dubb, R., et. al *Annals of the American Thoracic Society*, 13(5), 724-730.
- The Benefits of Implementing an Early Mobility Protocol in Postoperative Neurosurgical Spine Patients  
Rupich, K. et. al. *AJN, American Journal of Nursing*: June 2018 - Volume 118 - Issue 6 - p 46-53
- Building a Foundation of Mobility: From the ICU and Across the Continuum of Care. Arnold, M. *Int J SPHM* (7) 1: 40-44.
- Clinical and psychological effects of early mobilization in patients treated in a neurologic ICU: a comparative study. Klein, K., Mulkey, M., Bena, J.F., Albert, N.M., 2015. *Crit. Care Med*. 43 (4), 865-873.
- Critical Care Medicine Beds, Use, Occupancy, and Costs in the United States: A Methodological Review. Halpern NA, Pastores SM. *Crit Care Med*. 2015;43(11):2452-2459.
- Cost Savings Attributable to Reductions in Intensive Care Unit Length of Stay for Mechanically Ventilated Patients. Kahn JM, Rubenfeld GD, Rohrbach J, & Fuchs BD. *Medical Care* 2008, Dec; 46(12): 1226-1233.
- The Cost of Ventilator-Associated Events at an Academic Medical Center. Bryan Harris, Charisse Dillree, John Wolfe, Gale Woodland, Thomas Talbot, *Open Forum Infectious Diseases*, Volume 2, Issue suppl\_1, Fall 2015, 1263, <https://doi.org/10.1093/ofid/ofv131.106>

- Decision Making for Safe Patient Handling and Mobility Technology in an Early Mobility Program: A Case Report. LaVigne, A and Arnold, M. *Am J SPHM* (6)2:65-72.
- Early ambulation and length of stay in older adults hospitalized for acute illness. Fisher SR, Kuo YF, Graham JE, Ottenbacher, KJ, Ostir GV, *Arhc Intern Med* 2010; 170 (21): 1942-1943.
- Early mobility in the intensive care unit: evidence, barriers, and future directions. (2019). Dirkes, S. M., & Kozlowski, C. *Critical care nurse*, 39(3), 33-42.
- Early Mobility Guide for Reducing Ventilator-Associated Events in Mechanically Ventilated Patients AHRQ Publication No. 16(17)-0018-4-EF. <https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/hais/tools/mvp/modules/technical/early-mobility-mvpguide.pdf>
- Early mobilization: changing the mindset. Castro, E., Turcinovic, M., Platz, J., & Law, I. (2015). *Critical care nurse*, 35(4), e1-e6.
- Early Mobilization of Patients in Intensive Care: Organization, Communication and Safety Factors that Influence Translation into Clinical Practice. (2018). Hodgson, C. et. al. *Critical Care* 22:77. Biomed Central.
- Early physical rehabilitation in the ICU and ventilator liberation. Mendez-Tellez PA, Needham DM. *Respir Care*. 2012 Oct;57(10):1663-9.
- Economic Impact of Ventilator-Associated Pneumonia in a Large Matched Co-hort. Kollef MH, Hamilton CW, Ernst FR. *Infect Control Hosp Epidemiol* 2012(March). 33(3): 250-6. Doi: 10.1086/664049.
- Effects of early mobilization on the prognosis of critically ill patients: A systematic review and meta-analysis. (2020). Wang, J., Ren, D., Liu, Y., Wang, Y., Zhang, B., & Xiao, Q. *International Journal of Nursing Studies*, 103708.
- Integrating a multidisciplinary mobility programme into intensive care practice (IMMPTP): A multicentre collaborative. Bassett RD, Vollman, KM, Brandwenec L, Murrayd, *Intensive Crit Care Nurs* (2012), doi:10.1016/j.iccn.2011.12.001.
- Integrating Safe Patient Handling and Early Mobility: Combining Quality Initiatives. Wyatt, S., Meacci, K., & Arnold, M. (2020). *Journal of Nursing Care Quality*, 35(2), 130-134.
- Introduction to Progressive Mobility. Vollman, K. *CRITICALCARENURSE* Vol 30, No. 2, APRIL 2010 Supplement S3-5.
- Mobilizing Patients in the Intensive Care Unit Improving Neuromuscular Weakness and Physical Function. Dale M. Needham, *JAMA*. 2008;300(14):1685-1690.
- Mobilizing Patients in the Critical Care Setting. Côté, N. Ontario Respiratory Care Society, a section of The Lung Association UPDATE WINTER 2012. [www.on.lung.ca](http://www.on.lung.ca)
- Mobility programs for the hospitalized older adult: a scoping review. Smart, D. A., Dermody, G., Coronado, M. E., & Wilson, M. (2018). *Gerontology and Geriatric Medicine*, 4, 2333721418808146
- Move to improve: the feasibility of using an early mobility protocol to increase ambulation in the intensive and intermediate care settings. A. Drolet et al. *Phys Ther*. 2013 Feb;93(2):197-207.
- Technology to enhance physical rehabilitation of critically ill patients. D. M. Needham et al. *Crit Care Med* 2009 Vol. 37, No. 15 (Suppl.) S1-S6.
- Promoting mobility and reducing length of stay in hospitalized general medicine patients: A quality-improvement project. Hoyer, E. H., Friedman, M., Lavezza, A., Wagner-Kosmakos, K., Lewis-Cherry, R., Skolnik, J. L., ... & Needham, D. M. (2016). *Journal of hospital medicine*, 11(5), 341-347.
- Reducing Preventable Injuries Through the Safe Patient Handling and Mobility Program Bundle. (2020). Jones, D & Eaferton, G. *Int J SPHM*, 1(4), 134-138.
- Utilization of a Wellness/Mobility Technician: Interprofessional Inpatient Oncology Population- Focused Quality Improvement Project. (2021). Marcus, P, et al. *Int J SPHM*, 11(1), 36-43.

## **Making the Business Case/Cost Benefit Related Articles/Injury Rates**

Assessing the costs and benefits of moving and handling programmes. Thomas, D. R., Thomas, Y.L., Ashton, T., Wallaart, J., Armstrong, D., & McMahon, A. (2012). Wellington; ACC.

Benchmark Study of Healthcare Workers' Compensation Claims. ZURICH 2016.

[https://www.zurichna.com/\\_media/dbe/zna/docs/kh/hc/zurich-benchmark-study-of-healthcare-wc-claims.pdf](https://www.zurichna.com/_media/dbe/zna/docs/kh/hc/zurich-benchmark-study-of-healthcare-wc-claims.pdf)

Bringing a structural perspective to work: Framing occupational safety and health disparities for nursing assistants with work-related musculoskeletal disorders. (2018). Haas, A. D., Hunter, D. A., & Howard, N. L. *Work*, 59(2), 211-229.

A business case for patient care ergonomic interventions. Siddharthan, K.; Nelson, A. (January/February/March, 2005). *Nursing Administration Quarterly*.(29)1. 63-71.

Cost Effectiveness of a Multifaceted Program for Safe Patient Handling. (2006). Siddharthan, K., Nelson A., Tiesman, H. & Chen, F. *Advances in Patient Safety*, 3, 347-358.

Determinants of workplace injuries and violence among newly licensed RNs. (2018).Unruh, L., & Asi, Y. *Workplace health & safety*, 66(10), 482-492.

Developing a worldwide method for cost benefit analysis for safe patient handling interventions, to be completed by safe patient handling practitioners. A pilot study. Fray M, et al. Proceedings 19<sup>th</sup> triennial Congress of the IEA, Melbourne, Australia 2015

Health Nurse Healthy Nation 2-year Highlights 2018-2019 American Journal of Nursing Sept. 2020 3-11.

[https://www.healthnursehealthynation.org/globalassets/all-images-view-with-media/about/2019-hnhn\\_highlights.pdf](https://www.healthnursehealthynation.org/globalassets/all-images-view-with-media/about/2019-hnhn_highlights.pdf)

Health Nurse Healthy Nation 3-year Highlights 2018-2020. American Journal of Nursing Sept. 2019 3-11.

[https://www.healthnursehealthynation.org/globalassets/all-images-view-with-media/about/2020-hnhn\\_sup-8.pdf](https://www.healthnursehealthynation.org/globalassets/all-images-view-with-media/about/2020-hnhn_sup-8.pdf)

Implementing a resident lifting system in an extended care hospital: demonstrating cost-benefit. (2002). Spiegel J, Yassi A, Ronald LA, Tate RB, Hacking P, & Colby T. *AAOHN Journal* 50(3):128–134.

Leading Measures Preventing MSDs and Driving Ergonomic Improvements. Rostykus, W., & Mallon, J. (2017). *Professional Safety*, 62(09), 37-42.

Making the business case for a safe patient handling and mobility program. Celona J. *American Nurse Today* 2014;9:(9):

Making the Business Case to Initiate, Sustain and Evaluate Safe Patient Handling Programs Part 1. L. Enos *American Journal of Safe Patient Handling and Movement*, 1, (3): 8-15. <http://www.americanjournalofsphm.com/>

Making the Business Case to Initiate, Sustain and Evaluate Safe Patient Handling Programs Part 2. L. Enos. *American Journal of Safe Patient Handling and Movement*, 1, (4): 8-16. <http://www.americanjournalofsphm.com/>

Musculoskeletal pain symptoms among allied health professions' students: Prevalence rates and associated factors. (2017). Almhdawi, K. A., Mathiowetz, V., Al-Hourani, Z., Khader, Y., Kanaan, S. F., & Alhasan, M. *Journal of back and musculoskeletal rehabilitation*, 30(6), 1291-1301.

Occupational Injury and Illness data - Federal and State. U.S. Bureau of Labor Statistics. <http://www.bls.gov/iif/>

Optimizing a Business Case for Safe Health Care: An Integrated Approach to Safety and Finance. Institute for Healthcare Improvement. <http://www.ihl.org/resources/Pages/Tools/Business-Case-for-Safe-Health-Care.aspx>

Patient Handling and Mobility Assessments. Matz, M., et.al., Facility Guidelines Institute, 2nd ed. 2019.

[https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments\\_191008.pdf](https://www.fgiguilines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments_191008.pdf)

- Prevalence of musculoskeletal disorders among perioperative nurses: a systematic review and META-analysis. (2021). Clari, M., Godono, A., Garzaro, G., Voglino, G., Gualano, M. R., Migliaretti, G., ... & Dimonte, V. *BMC Musculoskeletal Disorders*, 22(1), 1-12.
- Prevalence of musculoskeletal work-related injuries among radiation therapists. (2020). Hanania, A. N., Cook, A., Threadgill, M. P., Conway, S. H., & Ludwig, M. *Radiologic technology*, 91(5), 414-421.
- Quality of the working environment and productivity: Research findings and case studies (2004). De Greef et al. European Agency for Safety and Health at Work
- Risks to Healthcare Organizations and Staff Who Manage Obese (Bariatric) Patients and Use of Obesity Data to Mitigate Risks: A Literature Review. (2021). McClean, K., Cross, M., & Reed, S. *Journal of Multidisciplinary Healthcare*, 14, 577.
- Safe lifting and movement of nursing home residents. Collins JW, Nelson A, [2006]. DHHS (NIOSH) Publication No. 2006-117. Cincinnati, OH: National Institute for Occupational Safety and Health.
- Saving costs, saving health care providers' backs, and creating a safe patient environment. Hunter, B., Branson, M., & Davenport, D. (2010). *Nurs Econ*. 28(2):130-4
- Safe Patient Handling Programs: Effectiveness and Cost Savings. Occupational Safety and Health Administration (OSHA), 2016. <https://www.osha.gov/Publications/OSHA3279.pdf>
- Self-reported Symptoms of Work-related Musculoskeletal Disorders Among Radiation Therapists. (2019). Evans, K. D., Sommerich, C. M., Klatt, M. D., Griffin, H., & Pan, X. *Radiation Therapist*, 28(2).
- The miracle of lifting technology. Joliff, J. (2006). *Nursing Homes*. [http://findarticles.com/p/articles/mi\\_m3830/is\\_9\\_55/ai\\_n19041589/](http://findarticles.com/p/articles/mi_m3830/is_9_55/ai_n19041589/)
- Workers' compensation costs for healthcare caregivers: Home healthcare, long-term care, and hospital nurses and nursing aides. (2021). Davis, K. G., Freeman, A. M., Ying, J., & Huth, J. R. *American Journal of Industrial Medicine*, 64(5), 369-380.
- Worker Protection: Private Sector Ergonomics Programs Yield Positive Results. (1997). U.S. Government Accounting Office (GAO) GAO/HEHS-97-163, p 137.
- Workplace Safety Index 2020 Healthcare and Social Assistance. Liberty Mutual Insurance. (2020). [https://viewpoint.libertymutualgroup.com/wp-content/uploads/2020/04/WSI\\_1003.pdf](https://viewpoint.libertymutualgroup.com/wp-content/uploads/2020/04/WSI_1003.pdf)
- Workplace hazards faced by nursing assistants in the United States: A focused literature review. Walton, A. L., & Rogers, B. (2017). *International journal of environmental research and public health*, 14(5), 544.
- Work-related psychosocial risk factors and musculoskeletal disorders in hospital nurses and nursing aides: a systematic review and meta-analysis. (2015). Bernal, D., Campos-Serna, J., Tobias, A., Vargas-Prada, S., Benavides, F. G., & Serra, C. *International journal of nursing studies*, 52(2), 635-648.
- Worker Safety in Hospitals Caring for our Caregivers. Website with Multiple Resources. Occupational Safety and Health Administration (OSHA). [https://www.osha.gov/dsg/hospitals/patient\\_handling.html](https://www.osha.gov/dsg/hospitals/patient_handling.html)
- Why Surveillance Informatics is an Integral Part of a Safe Patient Handling Program: Occupational Injuries Due to Patient Handling and Movement in 116 US Hospitals, Occupational Health Safety Network, 2012-2016. (2020). Gomma et al. *Journal of Association of Occupational Health Professionals*, 40(3): 16-25.

### **SPHM Education & Training in Healthcare Organizations**

- An online learning module about obesity and bariatric care for occupational therapy practitioners and students (Doctoral dissertation, Boston University). (2017). Phillips, J. T. <https://open.bu.edu/handle/2144/27059>

- Applying theories of health behavior and change to moving and handling practice. Wanless, S. (2017). *International Journal of Safe Patient Handling & Mobility (SPHM)*, 7(3), 105-109.
- A Qualitative Exploration of Community Therapists' Experiences of Applying Guidance on Safe Patient Handling. Wade, H. C. (2015). Masters Thesis, Coventry University, UK.
- A review of patient lifting interventions to reduce health care worker injuries. Aslam, I., Davis, S. A., Feldman, S. R., & Martin, W. E. (2015). *Workplace health & safety*, 63(6), 267-275.
- A systematic review of safe patient handling and mobility programs to prevent musculoskeletal injuries in occupational and physical therapists and assistants. Harwood, K., Darragh, A. R., Campo, M., Rockefeller, K., & Scalzetti, D. A. (2018). *International Journal for Safe Patient Handling and Mobility*, 8(1).
- An ergonomic protocol for patient transfer that can be successfully taught using simulation methods. O'Donnell, J. M., Goode Jr, J. S., Henker, R. A., Kelsey, S., Bircher, N., Peele, P., ... & Sutton-Tyrrell, K. (2012). *Clinical Simulation in Nursing*, 8(1), e3-e14.
- An Evidence-based Approach to Safe Patient Handling and Mobility Education. Perez, A. (2016). *Am J SPHM • Volume 6, Number 3*, 113-119
- Applying theories of health behavior and change to moving and handling practice. Wanless, S. (2017). *International Journal of Safe Patient Handling & Mobility (SPHM)*, 7(3), 105-109.
- Clinical skill: Moving and Handling All Answers Ltd. (November 2018).  
<https://nursinganswers.net/essays/clinical-skill-moving-handling-2898.php?vref=1>
- Competency-based training for patient handling. Hignett, S., & Crumpton, E. (2007). *Applied Ergonomics*, 38(1), 7-17.
- Developing manual handling skills in relative social isolation: A case study of Australian home care workers. Palesy, D. (2018). *Journal of Adult and Continuing Education*, 24(1), 37-57.
- Development of an education scheme for improving perioperative nurses' competence in ergonomics. Tamminen-Peter, L., & Nygren, K. (2019). *Work*, 64(3), 661-667.
- Do assistive devices, training, and workload affect injury incidence? Prevention efforts by nursing homes and back injuries among nursing assistants. D'Arcy, L. P., Sasai, Y., & Stearns, S. C. (2012). *Journal of advanced nursing*, 68(4), 836-845.
- Educational Case Report: A Safe Patient Handling and Mobilization Training Program in an Academic Medical Center. Enos, L., Eldredge, D., & Rockefeller, K. (2016) *Am J SPHM • Volume 6, Number 3*, 120-129
- Effect of training and lifting equipment for preventing back pain in lifting and handling: systematic review. Martimo, K. P., Verbeek, J., Karppinen, J., Furlan, A. D., Takala, E. P., Kuijjer, P. P. F., ... & Viikari-Juntura, E. (2008). *Bmj*, 336(7641), 429-431.
- Effective interventions for physical health complaints in nursing students and novice nurses: A systematic review. Kox, J. H., Bakker, E. J., Bierma-Zeinstra, S., Runhaar, J., Miedema, H. S., & Roelofs, P. D. (2020). *Nurse Education in Practice*, 44, 102772.
- Effective Training and Education Strategies as Part of a Safe Patient Handling and Movement Program. Monaghan, H. *Selecting Am. J. SPHM • Volume 1, Number 4*, 17-21
- Evaluation of the implementation fidelity of an ergonomic training program designed to prevent back pain. Berthelette, D., Leduc, N., Bilodeau, H., Durand, M. J., & Faye, C. (2012). *Applied Ergonomics*, 43(1), 239-245.
- Factors that influence the use of safe patient transfer technique in home care service. Skoglund-Öhman, I., & Kjellberg, K. (2011). *International Journal of Occupational Safety and Ergonomics*, 17(4), 433-444.
- Impact of California's safe patient handling legislation on musculoskeletal injury prevention among nurses. Lee, S. J., Lee, J. H., & Harrison, R. (2019). *American Journal of industrial medicine*, 62(1), 50-58.



- Impacts of Manual Handling Training and Lifting Devices on Risks of Back Pain among Nurses: An Integrative Literature Review. Aljohani, W. A., & Pascua, G. P. *Nurse Media Journal of Nursing*, 9(2), 210-230.
- International Round Table Discussion: Training and Competency in Safe Patient Handling. Gallagher, Hares, & Wright. *Int J SPHM* Volume 8, Number 3, 142-152
- Investigation of manual handling training practices in organisations and beliefs regarding effectiveness. McDermott, H., Haslam, C., Clemes, S., Williams, C., & Haslam, R. (2012). *International Journal of Industrial Ergonomics*, 42(2), 206-211.
- Learning manual handling without direct supervision or support: a case study of home care workers. Palesy, D., & Billett, S. (2017). *Social work education*, 36(3), 273-288.
- Making Safe Patient Handling and Mobility Training Effective. Part 1. What to Teach, Where and When to Teach It and How to Teach It. Monaghan, H. *Int J SPHM* Volume 9, Number 4, 143-148
- Making Safe Patient Handling and Mobility Training Effective. Part 2. Assessing Competent Practice. Monaghan, H. *Int J SPHM* (2020). Volume 10, Number 1, 37-41
- Manual handling: the challenges of different care environments. Johnstone, J. (2020). *British Journal of Nursing*, 29(6), 358-363.
- Moving and handling practice: the challenge for educators Moving and handling practice: the challenge for educators. Wanless, Hopper. *Equipment Services* July 2015
- Multidisciplinary approaches to moving and handling for formal and informal carers in community palliative care. Bartley, C., Webb, J. A., & Bayly, J. (2015). *International Journal of Palliative Care*, Vol 21 No 1
- Peer coaching and mentoring: a new model of educational intervention for safe patient handling in health care. Alamgir, H., Drebit, S., Li, H. G., Kidd, C., Tam, H., & Fast, C. (2011). *American journal of industrial medicine*, 54(8), 609-617.
- Recommendations for Teaching and Learning Skills with SPHM Technology. Mehan, P. (2016). *Am J SPHM* • Volume 6, Number 3, 104-108
- Reducing patient handling injuries through contextual training. Resnick, M. L., & Sanchez, R. (2009). *Journal of emergency nursing*, 35(6), 504-508.
- Role of Structured Safe Patient Handling Training for New-Hire Nursing Staff on Reducing Musculoskeletal Injuries, Staff Empowerment, and Knowledge Translation. Roy A, Joseph Y, Bannan K Dec 2020. *Int journal SPHM*. Volume 10, Number 4, 121-125
- Safe patient handling and mobility: Development and implementation of a large-scale education program. Lee, C., Knight, S. W., Smith, S. L., Nagle, D. J., & DeVries, L. (2018). *Critical care nursing quarterly*, 41(3), 253-263.
- Safe patient handling perceptions and practices: a survey of acute care physical therapists. Olkowski, B. F., & Stolfi, A. M. (2014). *Physical therapy*, 94(5), 682-695.
- Safe patient handling and mobility: Development and implementation of a large-scale education program. (2018). Lee, C., Knight, S. W., Smith, S. L., Nagle, D. J., & DeVries, L. *Critical care nursing quarterly*, 41(3), 253-263.
- Safe Patient Handling (SPH) Training Competency Guide for SPH Champions. Washington State Hospital Association, 2014. [http://www.wsha.org/wp-content/uploads/Competency\\_Guide\\_for\\_SPH\\_Champions.pdf](http://www.wsha.org/wp-content/uploads/Competency_Guide_for_SPH_Champions.pdf)
- Simulation to Teach Safe Patient Handling and Mobility for Home Caregivers. Roberts, T. (2020). *Home Health Care Management & Practice*, 1084822320925801.
- The incidence of Australian private practice sonographers moving patients unassisted and their level of training: A pilot study. Newton, K., Quinton, A., & Childs, J. (2020). *Sonography*, 7(2), 48-54.
- The mentorship experience of students and nurses in pre-registration nursing education: A thematic synthesis of qualitative studies. (2021). Lee, N. P., & Chiang, V. C. *Nursing & Health Sciences*, 23(1), 69-86.