

Gerontology Resources for **APRNs in Acute and Emergent Care Settings**

2nd Edition

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2nd Edition



Gerontological Advanced Practice Nurses Association

Box 56 East Holly Avenue, Pitman, New Jersey 08071-0056
866-355-1392 | GAPNA@ajj.com | gapna.org

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Preface

The goal of the *Gerontology Resources for APRNs in Acute and Emergent Care Settings* (2nd edition) (*“Acute Care Resource Guide”*) is to make geriatric and gerontological content easily accessible to those caring for older adults in higher-acuity care settings. It is designed with advance practice registered nurse (APRN) students, preceptors, clinicians, and educators in mind, and to provide a single portal to comprehensive resources. This *Acute Care Resource Guide* is organized alphabetically by acute and emergent care topics and includes links to websites and videos available publicly. Some resources may require a login and/or a nominal fee for access. The *Acute Care Resource Guide* was developed by APRNs who special-

ize in the care and delivery of quality health care to older, acutely ill adults. Resources are primarily from open sources, professional organizations, and universities. Rather than an exhaustive list of topics, the *Acute Care Resource Guide* focuses on common acute and emergent issues among older adults.

For best online viewing and functionality, open the links using Google Chrome, Firefox, or Safari web browsers, or the latest version of Internet Explorer. To report a broken link or to suggest additional acute and emergent care topics to include in future editions, please contact the GAPNA National Office at GAPNA@ajj.com.

Acute Care Resource Guide Taskforce

Michele H. Talley, PhD, ACNP-BC, FAANP, FNAP

Gregory Marler, DNP, APRN, ACNP-BC, FCCP

Valerie K. Sabol, PhD, MBA, ACNP-BC, GNP-BC, CCRN, CNE, ANEF, FAANP, FAAN

JoAnn Coleman, DNP, ACNP-BC, ANP-BC, AOCN, GCN

Michelle Moccia, DNP, ANP-BC, GS-C

Benjamin Smallheer, PhD, RN, ACNP-BC, FNP-BC, CCRN, CNE

Denise L. Lyons, DNP, APRN, AGCNS-BC

Keiko H. Kuykendall, DNP, AGPCNP-BC, GS-C

Somali Nguyen, DNP, CRNP, AGACNP-BC

Rebecca Suttle, DNP, CRNP, AGACNP-BC

Deanna Adams, MSN, APRN, FNP-C, AGACNP-BC, CEN

Jamie Smith, FNP-C

Patricia K. Sauter, MSN, CNP-BC

Pat Walling, DNP, RN, APN

Gerontological Resources for Healthcare Management

Acute Kidney Injury (AKI)

International Society of Nephrology. (2012). Kidney disease: Improving global outcomes. KDIGO clinical practice guideline for acute kidney injury. *Kidney International*, 2(Suppl. 1), 1-138. <https://kdigo.org/wp-content/uploads/2016/10/KDIGO-2012-AKI-Guideline-English.pdf>

This document offers comprehensive evidence-based clinical practice guidelines in caring for adults with AKI. It details AKI definition, pharmacological approaches, renal replacement therapy (including when to start and stop), and management to improve patient outcomes.

5-Minute Clinical Consult. (2020). *Acute kidney injury*. Wolters Kluwer.

https://www.unboundmedicine.com/5minute/view/5-Minute-Clinical-Consult/117660/all/Acute_Kidney_Injury

This chapter covers the basics of AKI and directs attention to the appropriate diagnostic tests and management.

Joslin, J., & Ostermann, M. (2012). Care of the critically ill emergency department patient with acute kidney injury. *Emergency Medicine International*, Article ID 760623. <https://doi.org/10.1155/2012/760623>

This article contains tables and classifications to define AKI based on renal function and urine output criteria, and the diagnostic work-up with explanations.

Web Links

Farkas, J. (2019). Acute kidney injury. *Internet Book of Critical Care (IBCC)*.

This up-to-date resource provides an overview of AKI, highlights key points, includes a podcast, and is based on peer review.

Malkina, A. (2019). *Acute kidney injury (AKI)*. Merck Manual Professional Version.

This resource highlights the fundamentals of AKI (e.g., definition, etiology, signs and symptoms, diagnosis, treatment). It includes a table on the staging criteria for AKI and includes a consumer/patient version of AKI.

Cardiovascular

Afilalo, J., Lauck, S., Kim, D.H., Lefevre, T., Piazza, N., Lachapelle, K., ... Perrault, L.P. (2017). Frailty in older adults undergoing aortic valve replacement: The FRAILTY-AVR study. *Journal of the American College of Cardiology*, 70(6), 689-700. <https://doi.org/10.1016/j.jacc.2017.06.024>

Using frailty scales in the elderly patient undergoing transcatheter aortic valve replacement (TAVR) and surgical aortic valve replacement (SAVR) can assist in determining the degree of risk in postoperative morbidity and mortality. This article provides a quick frailty illustration/toolset.

Bergmann, T., Sengupta, P.P., & Narula, J. (2017). Is TAVR ready for the global aging population? *Global Heart*, 12(4), 291-299. <https://doi.org/10.1016/j.gheart.2017.02.002>

While transcatheter aortic valve replacement (TAVR) is a specialized procedure, availability is limited in low-resource areas. This article describes a potential pathway forward in these resource-naive regions of the world.

Duque, E.R., Briasoulis, A., & Alvarez, P.A. (2019). Heart failure with preserved ejection fraction in the elderly: Pathophysiology, diagnostic and therapeutic approach. *Journal of Geriatric Cardiology*, 16(5), 421-428. <https://doi.org/10.11909/j.issn.1671-5411.2019.05.009>

Heart failure with a preserved ejection fraction significantly impacts the elderly in terms of morbidity, mortality, and financially. Understanding the identification, pathophysiology, and treatment overview is provided in this article.

Mizuno, M., Kajimoto, K., Sato, N., Yumino, D., Minami, Y., Murai, K., ... Takano, T. (2016). Clinical profile, management, and mortality in very-elderly patients hospitalized with acute decompensated heart failure: An analysis from the ATTEND registry. *European Journal of Internal Medicine*, 27, 80-85. <https://doi.org/10.1016/j.ejim.2015.08.015>

Understanding the differences according to age is important for the treatment of patients who present with acute decompensated heart failure. This article provides classifications and common presentations according to age.

Nicolini, F., Agostinelli, A., Vezzani, A., Manca, T., Benassi, F., Molardi, A., & Gherli, T. (2014). The evolution of cardiovascular surgery in elderly patient: A review of current options and outcomes. *Biomedical Research International*, Article No. 736298. <https://doi.org/10.1155/2014/736298>

This article provides an overview of cardiac surgical procedures typically seen in the elderly population alongside outcomes data.

Teixeira, A., Arrigo, M., Tolppanen, H., Gayat, E., Laribi, S., Metra, M., ... Mebazaa, A. (2016). Management of acute heart failure in elderly patients. *Archives of Cardiovascular Diseases*, 109(6-7), 422-430. <https://doi.org/10.1016/j.acvd.2016.02.002>

Management of acute heart failure can be complicated for many patients, but the elderly can present a particularly challenging treatment paradigm as they often do not present with typical symptoms. This article provides a guide to triaging and managing heart failure in the elderly patient.

Delirium

Hshieh, T.T., Yue, J., Oh, E., Puelle, M., Dowal, S., Trivison, T., & Inouye, S.K. (2015). Effectiveness of multicomponent nonpharmacological delirium interventions: A meta-analysis. *JAMA Internal Medicine*, 175(4), 512-520. <https://doi.org/10.1001/jamainternmed.2014.7779>

This meta-analysis provides evidence available on non-pharmacological interventions used to reduce delirium and its associated poor outcomes.

Kennedy, M., Helfand, B.K.I., Gou, R.Y., Gartaganis, S.L., Webb, M., Moccia, J.M., ... Inouye, S.K. (2020). Delirium in older patients with COVID-19 presenting to the emergency department. *JAMA Network Open*, 3(11), e2029540. <https://doi.org/10.1001/jamanetworkopen.2020.29540>

This article outlines the importance of screening and identifying COVID-19 in older adults presenting with delirium to the emergency department as this may be their only sign/symptom.

Khan, B.A., Perkins, A.J., Gao, S., Hui, S.L., Campbell, N.L., Farber, M.O., ... Boustani, M.A. (2017). The confusion assessment method for the ICU-7 delirium severity scale: A novel delirium severity instrument for use in the ICU. *Critical Care Medicine*, 45(5), 851-857. <https://doi.org/10.1097/CCM.0000000000002368>

This article provides the reliability and validity of the Confusion Assessment Method in assessing ICU delirium severity.

Shenvi, C., Kennedy, M., Austin C.A., Wilson, M.P., Gerardi, M., & Schneider, S. (2019). Managing delirium and agitation in older emergency department patient: The ADEPT tool. *American College of Emergency Physician*, 75(2), 136-145. <https://doi.org/10.1016/j.annemergmed.2019.07.023>

This article shows a novel approach using the Assess, Diagnose, Evaluate, Prevent, and Treat (ADEPT) tool as a recommended approach to use to screen, diagnose, and treat patients with delirium and agitation.

Tampi, R.R., Tampi, D.J., & Ghori, A.K. (2016). Acetylcholinesterase inhibitors for delirium in older adults. *American Journal of Alzheimer's Disease and other Dementias*, 31(4), 305-310. <https://doi.org/10.1177/1533317515619034>

This systematic review evaluates randomized control trials that sought to evaluate acetylcholinesterase inhibitor use in older adults with delirium.

Web Links

American College of Emergency Physicians. (2021). [ADEPT: Confusion and Agitation in the Elderly ED Patient](#).

This application resource can be used by providers to assist with screening, diagnosing, and treating patients with delirium and agitation.

The American Geriatrics Society CoCare. (2019). [The Hospital Elder Life Program \(HELP\)](#).

This website provides a description of an innovative model of hospital care designed to prevent delirium and functional decline.

The American Geriatrics Society CoCare. (2021). [Delirium Prevention Toolkit Amidst COVID-19 in the Older Emergency Department Patient](#).

A resource for providers to use in delirium prevention during the COVID-19 pandemic.

Critical Illness, Brain Dysfunction, and Survivorship (CIBS) Center. (2021). [Monitoring Delirium in the ICU](#).

Clinical practice guidelines for pain, agitation, and delirium recommend that all ICU patients be assessed for delirium once per shift using specific tools. Tools used for this assessment are located on this website.

Videos

John Hopkins University Hospital. (2018). [ICU Diaries Help Prevent Post-Traumatic Stress Disorder](#).

This 3-minute video includes an explanation of the use of ICU diaries in effort to prevent post-traumatic stress disorder.

Critical Illness, Brain Dysfunction, and Survivorship (CIBS) Center. (2021). [Series of Patient Testimonials Post-ICU](#).

This resource provides written accounts and video testimonials from patients who experienced delirium in the ICU.

Hypoactive Delirium

Hosker, C., & Ward, D. (2017). Hypoactive delirium. *BMJ*, 357(j2047). <https://doi.org/10.1136/bmj.j2047>

This resource provides an overview of hypoactive delirium and epidemiologic data, guidance on how to identify hypoactive delirium, potential differential diagnoses, how to diagnose, and how to treat hypoactive delirium.

Dementia

Parke, B., Boltz, M., Hunter, K.F., Chambers, T., Wolf-Ostermann, K., Adi, M.N., ... & Gutman, G. (2017). A scoping literature review of dementia-friendly hospital design. *The Gerontologist*, 57(4). <https://doi.org/10.1093/geront/gnw128>.

This manuscript provides a review of literature related to dementia-friendly acute care design.

Zonsius, M.C., Cothran, F.A., & Miller, J.M. (2020). CE: Acute care for patients with dementia. *The American Journal of Nursing*, 120(4), 34-42. <https://doi.org/10.1097/01.NAJ.0000660024.45260.1a>.

This continuing educational offering provides evidence-based strategies for nurses to use when addressing the needs of patients with dementia who require acute care.

Web Links

Center for Aging Research and Education (CARE). (2021). *Dementia-Friendly Toolkit*. University of Wisconsin-Madison School of Nursing.

CARE's dementia friendly training materials can be used with students, healthcare or other professional staff, family caregivers, community groups, or local businesses.

Geriatric Emergency Department Collaborative. (2021). *Emergency Department Care of Individuals Who Have Dementia*.

This toolkit contains resources to improve care of individuals with dementia in the emergency department.

Institute for Healthcare Improvement. (2020). *Age-Friendly Health Systems: Guide to Using the 4M's in the Care of Older Adults*.

This resource contains guidelines for *Age-Friendly Health Systems: Guide to Using the 4Ms in the Care of Older Adults* and was authored by the John A. Hartford Foundation and the Institute for Healthcare Improvement in partnership with the American Hospital Association and the Catholic Health Association of the United States.

Videos

Institute for Healthcare Improvement. (2021). *What is an Age-Friendly Health System?*

This video is provided through an initiative of the Institute of Healthcare Improvement and the John A. Hartford Foundation and defines age-friendly health systems.

Depression

Rossom, R. C., Simon, G.E., Coleman, K.J., Beck, A., Oliver, M., Stewart, C., & Ahmedani, B. (2018). Are wishes for death or suicidal ideation symptoms of depression in older adults? *Aging & Mental Health*, 23(7), 912-918. <https://doi.org/10.1080/13607863.2017.1423032>

Clinicians may question whether thoughts of being better off dead are normal consequences of aging rather than symptoms of depression. Elderly patients who verbalize suicidal ideations should be screened for depression.

Web Link

Geriatric Mental Health Foundation. (n.d.). *Depression Late in Life: Not a Normal Part of Aging*.

This website provides information on causes and effects of depression and resources for patients and families.

Diabetes

American Diabetes Association. (2021). Older adults: Standard of medical care in diabetes - 2021. *Diabetes Care*, 44(Suppl. 1), S168-S179. <https://doi.org/10.2337/dc21-S012>

The American Diabetes Association's Professional Practice Committee is an interprofessional group tasked with updating the Standards of Medical Care in Diabetes each year. These clinical practice recommendations provide guidance on diabetes care and treatment goals as well as tools that can be used to evaluate quality of care for older adults.

LeRoith, D., Biessels, G.J., Braithwaite, S.S., Casanueva, F.F., Draznin, B., Halter, J.B., ... Sinclair, A.J. (2019). Treatment of diabetes in older adults: An Endocrine Society clinical practice guideline. *The Journal of Clinical Endocrinology & Metabolism*, 104(5), 1520-1574. <https://doi.org/10.1210/jc.2019-00198>

The Endocrine Society convened a group of experts, known as the Writing Committee, who was tasked with making clinical recommendations on health and quality-of-life issues for older adults with diabetes.

Umpierrez, G.E., & Pasquel, F.J. (2017). Management of inpatient hyperglycemia and diabetes in older adults. *Diabetes Care*, 40(4), 509-517. <https://doi.org/10.2337/dc16-0989>

Diabetes experts provide recommendations for the inpatient older adult's management of diabetes and hyperglycemia.

End-of-Life Care, Advance Care Planning

Atluru, A. (2017). Revisiting decision-making capacity. *The American Journal of Psychiatry. Residents' Journal*. <https://doi.org/10.1176/appi.ajp-rj.2016.111105>

The article provides information about decision-making capacity versus competency using several case studies.

Barstow, C., Shahan, B., & Roberts, M. (2018). Evaluating medical decision-making capacity in practice. *American Family Physician*, 98(1), 40-46. <https://www.aafp.org/afp/2018/0701/p40.html>

The article provides clinical guidelines to evaluate patients' medical decision-making along with case scenarios and discussion.

Carter, H.E., Lee, X.J., Gallois, C., Winch, S., Callaway, L., Willmott, L., ... Graves, N. (2019). Factors associated with non-beneficial treatments in end of life hospital admissions: A multicentre retrospective cohort study in Australia. *BMJ Open*, 9(11), e030955. <https://doi.org/10.1136/bmjopen-2019-030955>

The article provides a result of a retrospective multicenter cohort study to assess factors associated with non-beneficial treatment (NBT) in hospitals, beyond an intensive care setting in Australia. One of the findings revealed a positive association between NBT and older patients.

Donnelly, S., Prizeman, G., Coimín, D.Ó., Korn, B., & Hynes, G. (2018). Voices that matter: End-of-life care in two acute hospitals from the perspective of bereaved relatives. *BMC Palliative Care*, 17, Article No. 117. <https://doi.org/10.1186/s12904-018-0365-6>

The article details a qualitative analysis of open-ended free text questions that were asked as part of a post-bereavement survey conducted in two adult acute hospitals in Ireland. This study provides a description of good end-of-life care and where care can be improved.

Sathitratanaheewin, S., Engelberg, R.A., Downey, L., Lee, R.Y., Fausto, J.A., Starks, H., ... Curtis, J.R. (2018). Temporal trends between 2010 and 2015 in intensity of care at end-of-life for patients with chronic illness: Influence of age under vs. over 65 years. *Journal of Pain and Symptom Management*, 55(1), 75-81. <https://doi.org/10.1016/j.jpainsymman.2017.08.032>

The article provides a retrospective analysis of Medicare data that shows a decreasing trend over time (2010-2015) in intensity of end-of-life care. Hospital and ICU admission in the last 30 days of life may be a more responsive quality metric than the site of death.

Young, K.A., Redfield, M.M., Strand, J.J., & Dunlay, S.M. (2017). End-of-life discussions in patients with heart failure. *Journal of Cardiac Failure*, 23(11), 821-825. <https://doi.org/10.1016/j.cardfail.2017.08.451>

The article, an observational cohort study at Mayo Clinic hospitals in southern Minnesota, reports the majority of patients hospitalized with advanced heart failure did not recall conversations with their physicians about their preferences for end-of-life care. The result shows the modifiable gap for optimal long-term care of patients with heart failure.

Books

Byock, I. (2013). *The best care possible: A physician's quest to transform care through the end of life*. Avery/Penguin Group. ISBN 978-1-58333-459-1

The author, a palliative physician, shares complex conversations he has had with patients and families about end-of-life. He illustrates his honesty, compassion, and humanity through complex real-life stories.

Gawande, A. (2014). *Being mortal: Medicine and what matters in the end*. Metropolitan books. ISBN 978-0-8050-9515-9 (hardcover), ISBN 978-1-62779-055-0 (electronic book)

The author, a surgeon, writer, and public speaker, reveals the suffering of patients and struggles of his profession through stories of his patients and families. He reveals the ultimate goal of medicine is to face the inescapable, aging and death, in order to promote good lives to the end.

Web Links

University of Toronto, Dalla Lana School of Public Health. (2008). [Community Tools: Aid to Capacity Evaluation \(ACE\)](#).

The website provides a link to a downloadable Aid to Capacity Evaluation (ACE) package.

The Conversation Project & Institute for Healthcare Improvement. (n.d.). [How to Engage Patients and Families About End-of Life Care](#). Resources for Healthcare Professionals.

The resource provides links to online basic skills for conversations about end-of-life, toolkit, advance care planning policies, cultural and ethical considerations, resources for engaging patients, and family and research on end-of-life conversation. It is required to create an account with no charge to take free Institute for Healthcare Improvement online courses ("open school").

Emergency Care

Casey, S.D., Stevenson, D.E., Mumma, B.E., Slee, C., Wolinsky, P.R., Hirsch, C.H., & Tyler, K. (2017). Emergency department pain management following implementation of a geriatric hip fracture program. *The Western Journal of Emergency Medicine*, 18(4), 585-591. <https://doi.org/10.5811/westjem.2017.3.32853>

Implementation of a geriatric fracture program was associated with improved emergency department pain management for geriatric patients with fragility hip fractures.

Lee, W.J., Woo, S.H., Kim, D.H., Seol, S.H., Park, S.K., Choi, S.P., ... Lee, S.O. (2016). Are prognostic scores and biomarkers such as procalcitonin the appropriate prognostic precursors for elderly patients with sepsis in the emergency department? *Aging Clinical and Experimental Research*, 28(5), 917-924. <https://doi.org/10.1007/s40520-015-0500-7>

The authors conducted a comparative analysis of the abbreviated mortality in the emergency department sepsis (abbMEDS) score, sequential organ failure assessment (SOFA) score, infection probability score (IPS), and cytokine levels to investigate the effectiveness of each index in predicting the prognosis of elderly patients with sepsis in the emergency department.

McCabe, J.J., & Kennelly, S. (2015). Acute care of older adults in the emergency department: Strategies to improve patient outcomes. *Open Access Emergency Medicine*, 7, 45-54. <https://doi.org/10.2147/OAEM.S69974>

Older patients in the emergency department are more likely to have complex presentations and multiple comorbidities. This clinical update review outlines the common geriatric syndromes encountered in the emergency department, along with appropriate strategies that can be used to support the clinical decision matrix of this vulnerable population and improve outcomes.

Web Links

American College of Emergency Physicians, American Geriatric Society, Emergency Nurses Association, & Society for Academic Emergency Medicine. (2013). [*Geriatric Emergency Department Guidelines*](#).

This document provides a standardized set of guidelines that can effectively improve the care of the geriatric population in the emergency department by determining the appropriate level of care needed for the older adult.

The Geriatric Emergency Department Collaborative. (2020). [*Tools and Resources*](#).

This website provides several tools and resources that can be utilized for the care of geriatric patients in the emergency department.

The Geriatric Emergency Department Collaborative. (2020). [*COVID-19 in Older Adults: An Update for Emergency Providers*](#).

This website is designed for healthcare professionals, caregivers, and others caring for older adults and provides guidelines for care of the older adult with COVID-19 in the emergency department.

The Geriatric Emergency Department Collaborative. (2020). [*What Does a Geriatric Emergency Department Look Like?*](#)

This website is designed for healthcare professionals, caregivers, and others caring for older adults and provides guidelines for care of the older adult in a geriatric emergency department.

The Geriatric Emergency Department Collaborative. (2020). [*Management of Delirium in Older Adults in the Emergency Department*](#).

This toolkit provides a structured approach, change strategies, resources, and a step-by-step guide to help improve delirium detection in the emergent setting (e.g., emergency department).

Frailty

Royal College of Physicians. (2020). [*Acute Care Toolkit 3: Acute Medical Care for Frail Older People*](#).

This toolkit and addendum provide recommendations for healthcare providers working in acute medical units to assist in identifying urgent issues to improve patient outcomes for frail older adults.

Geriatric Syndromes

Mudge, A.M., Banks, M.D, Barnett, A.G., Blackberry, I., Graves, N., Green, T., & Young, A.M. (2017). CHERISH (Collaboration for Hospitalized Elders Reducing the Impact of Stays in Hospital): Protocol for a multi-site improvement program to reduce geriatric syndromes in older patients. *BMC Geriatrics*, 17, Article No. 11. <https://doi.org/10.1186/s12877-016-0399-7>

Older adults who are hospitalized are at high risk for many geriatric syndromes. This article explains the CHERISH study's process in successfully improving the care of hospitalized older adults.

Health Literacy

Chesser, A.K., Keene Woods, N., Smothers, K., & Rogers, N. (2016). Health literacy and older adults: A systematic review. *Gerontology and Geriatric Medicine*. <https://doi.org/10.1177/2333721416630492>

The systematic review article provides the importance of working to improve healthcare strategies for older adults with low health literacy and highlights the need for a standardized and validated clinical health literacy screening tool for older adults.

De Oliveria, G.S., Jr., McCarthy, R.J., Wolf, M.S., & Holl, J. (2015). The impact of health literacy in the care of surgical patients: A qualitative systematic review. *BMC Surgery*, 15, 86. <https://doi.org/10.1186/s12893-015-0073-6>

This article provides a systematic review of studies aimed at determining the impact health literacy has among surgical patients and their perioperative outcomes.

Web Links

Center for Disease Control and Prevention (CDC). (2020). [*Health Literacy. Older Adults*](#).

The website provides information about effective communication while considering health literacy of older adults. It includes a link to a podcast by Dr. Linda Anderson, former director of CDC's Healthy Aging Program, who discusses the importance of addressing health literacy issues for older adults.

Scott, G.A. (2019). *Clinical Advisor: Health Literacy and Older Adults*.

This article provides basic information about how low health literacy in older adults affects their health status and often poor medical outcomes. It emphasizes using recommended strategies in practice to potentially improve patient outcomes and decrease cost of health care through better communication.

Videos

North Coast Primary Health Network. (2017). *What is Health Literacy?*

This short, 1-minute animated video describes the meaning of health literacy.

2010 Legacies Now. (2010). *Health Literacy: Learning is the Best Medicine*.

This 9-minute video describes literacy and its importance in health determinants.

Center for Collaboration, Motivation, and Innovation. (2016). *Health Literacy Umbrella*.

This 4-minute video reviews key concepts for improving health literacy.

PEI Literacy Alliance. (2012). *Talking with Seniors*.

This 1-minute animated YouTube video describes the meaning of health literacy.

Hematology

Oncologic Emergencies

Klemencic, S., & Perkins, J. (2019). Diagnosis and management of oncologic emergencies. *The Western Journal of Emergency Medicine*, 20(2), 316-322. <https://doi.org/10.5811/westjem.2018.12.37335>

The authors review commonly encountered oncologic emergencies that can be seen in the emergency room. The diagnosis and management of each is included (neutropenic fever, tumor lysis syndrome, hypercalcemia of malignancy, and hyperviscosity syndrome).

Higdon, M.L., Atkinson, C.J., & Lawrence, K.V. (2018). Oncologic emergencies: Recognition and initial management. *American Family Physician*, 97(11), 741-748. <https://www.aafp.org/afp/2018/0601/p741.html>

The authors classify several different oncologic emergencies (metabolic, hematologic, structural, or treatment related) and provide a short review of each (tumor lysis syndrome, hypercalcemia of malignancy, syndrome of inappropriate antidiuretic hormone, febrile neutropenia, hyperviscosity syndrome, superior vena cava syndrome, malignant epidural spinal cord compression, malignant pericardial effusion, extravasation, GI issues, radiation complications, immunotherapy complications).

Thandra, K., Salah, Z., & Chawla, S. (2020). Oncologic emergencies - The old, the new, and the deadly. *Journal of Intensive Care Medicine*, 35(1), 3-13. <https://doi.org/10.1177%2F0885066618803863>

These authors review some of the oncologic emergencies that may require critical care measures in the intensive care setting and include a discussion on potential adverse effects of the newer and more innovative therapies (febrile neutropenia, leukostasis, tumor lysis syndrome, malignant pericardial effusion and tamponade, pulmonary hemorrhage, CAR-T cell toxicities, and immune checkpoint inhibitor adverse events).

Thrombosis

Hamza, M.S., & Mousa, S.A. (2020). Cancer-associated thrombosis: Risk factors, molecular mechanisms, future management. *Clinical and Applied Thrombosis/Hemostasis*, 26, 1-13. <https://doi.org/10.1177/1076029620954282>

The authors discuss the risk factors for cancer-associated thrombosis and the mechanisms for increased risk of clotting and actual clotting. Treatment options are described.

Ortel, T.L., Neumann, I., Ageno, W., Beyth, R., Clark, N.P., ... Zhang, Y. (2020). American Society of Hematology 2020 guidelines for management of venous thromboembolism: Treatment of deep vein thrombosis and pulmonary embolism. *Blood Advances*, 4(19), 4693-4738. <https://doi.org/10.1182/bloodadvances.2020001830>

This article provides The American Society of Hematology's 2020 guidelines for management of venous thromboembolism.

Hospital Care, Transition of Care

Blenkinsopp, A., Cheong, V-Li, Fylan, B., Karban, K., Silcock, J., Smith, H., & Tomlinson, J. (2020). Successful care transitions for older people: A systematic review and meta-analysis of the effects of interventions that support medication continuity. *Age and Ageing*, 49(4), 558-569. <https://doi.org/10.1093/ageing/afaa002>

Medication-related problems occur frequently at the time of discharge from hospital to community. Bridging the gap and ensuring medication continuity has an impact on reducing hospital readmission.

Karaca, Z., Sun, R., & Wong, H.S. (2018). Trends in hospital emergency department visits by age and payer, 2006-2015. *HCUP Statistical Brief #238*. Agency for Healthcare Research and Quality. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb238-Emergency-Department-Age-Payer-2006-2015.pdf>

The article provides trends of high emergency department utilization by older people, thus higher Medicare (and private insurance) utilization.

Web Links

Medicare. (2020). [The Official U.S. Government Site for Medicare](#).

A federal government website managed and paid for by the U.S. Centers for Medicare & Medicaid Services. Medicare primarily provides health insurance for Americans age 65 and older.

National Transition of Care Coalition. (2021). [National Transition of Care Coalition](#) (NTOCC).

Founded in 2006, NTOCC's vision is to improve transitions of care by increasing quality of care and patient safety while controlling cost. Its mission is to raise awareness about transitions of care among healthcare professionals, government leaders, patients, and caregivers to increase the quality of care, reduce medication errors, and enhance clinical outcomes. The website provides free resources for family caregivers, healthcare professionals, policymakers, and media.

Medicare. (2020). [A Quick Look at Medicare](#).

The resource provides basic information regarding Medicare coverage. Many acute care nurses and even medical providers are unsure about what and which services Medicare covers. Lack of knowledge often causes ineffective medical care planning, especially at discharge.

Legal Issues

Moye, J., & Marson, D.C. (2007). Assessment of decision-making capacity in older adults: An emerging area of practice and research. *Journal of Gerontology*, 62B(1), P3-P11. <https://doi.org/10.1093/geronb/62.1.P3>

This article highlights the importance of decisional capacity among an aging society when law and clinical practice frequently intersect.

Web Links

American Bar Association. (2020). [Toolkit for Health Care Advance Planning](#).

This website is designed to assist patients make healthcare advance directives.

Malnutrition

Abd Aziz, N., Teng, N., Abdul Hamid, M.R., & Ismail, N.H. (2017). Assessing the nutritional status of hospitalized elderly. *Clinical Interventions in Aging*, 12, 1615-1625. <https://doi.org/10.2147/CIA.S140859>

The article provides a summary of nutritional status among hospitalized elderly and the role of nutritional assessment tools.

Avelino-Silva, T.J., & Jaluul, O. (2017). Malnutrition in hospitalized older patients: Management strategies to improve patient care and clinical outcomes. *International Journal of Gerontology*, 11(2), 56-61. <https://doi.org/10.1016/j.ijge.2016.11.002>

This article provides the importance of incorporating nutritional assessment in clinical hospital practice with a focus on evaluations and implementation of nutritional care plans.

Zhang, Z., Perelra, S.L., Luo, M., & Matheson, E.M. (2017). Evaluation of blood biomarkers associated with risk of malnutrition in older adults: A systematic review and meta-analysis, *Nutrients*, 9(8), 829. <https://doi.org/10.3390/nu9080829>

This systematic review and evaluation of malnutrition biomarkers among older adults reviewed showed that BMI, hemoglobin, and total cholesterol are useful biomarkers of malnutrition in older adults. The reference ranges and cut-offs may need to be updated to avoid underdiagnosis of malnutrition.

Web Links

American Academy of Hospice and Palliative Medicine. (2021). [Don't Recommend Percutaneous Feeding Tubes in Patients with Advanced Dementia; Instead Offer Oral Assisted Feeding](#). Choosing Wisely.

This website provides a point of view in feeding patients who have dementia.

American Board of Internal Medicine. (2013). [Choosing Wisely: Feeding Tubes for People with Alzheimer's](#).

The website provides an explanation of when feeding tubes are used in patients with Alzheimer's disease.

Nestle Nutrition Institute. (2006). [Mini Nutrition Assessment, MNA®](#).

MNA is a validated nutrition screening and assessment tool that can identify older patients age 65 and older who are malnourished or at risk for malnourishment.

Mobility

Assessment Tools

Soares Menezes, K.V.R., Auger, C., de Souza Menezes, W.R., & Guerra, R.O. (2017). Instruments to evaluate mobility capacity of older adults during hospitalization: A systematic review. *Archives of Gerontology & Geriatrics*, 72, 67-79. <https://doi.org/10.1016/j.archger.2017.05.009>

Independent mobility is a key factor in predicting morbidity and determining hospital discharge readiness for older patients. Eleven mobility instruments used to evaluate elderly in acute care were identified in this systematic review.

Acutely Ill

Hatheway, O.L., Mitnitski, A., & Rockwood, K. (2017). Frailty affects the initial treatment response and time to recovery of mobility in acutely ill older adults admitted to the hospital. *Age & Aging*, 46(6), 920-925. <https://doi.org/10.1093/ageing/afw257>

This article reviews how frailty and mobility impairment affect the recovery of balance and mobility in acutely ill older patients. Frail patients are at greater risk of incomplete or lengthy recovery from impaired mobility and balance.

Wald, H., Ramaswamy, R., Perskin, M., Roberts, L., Bogaisky, M., Suen, W., & Mikhailovich, A. (2019). The case for mobility assessment in hospitalized older adults: American Geriatrics Society white paper executive summary. *Journal of the American Geriatrics Society*, 67(1), 11-16. <https://doi.org/10.1111/jgs.15595>

The Quality and Performance Measurement Committee of the American Geriatrics Society developed a white paper supporting greater focus on mobility as an outcome for hospitalized older adults.

Web Links

Duke University Occupational and Environmental Safety Office. (2021). *Duke MOVES (Duke Moves Often, Very Early, and Safely)*.

Duke MOVES provides links to bedside mobility assessment toolkit (BMAT); champion and coach toolkit; and fall, equipment, and bariatric resources. The BMAT allows nurses (and other healthcare workers) to determine appropriate patient handling and mobility equipment/device to safely move or mobilize the patient in acute care.

Johns Hopkins Medicine. (2021). *Johns Hopkins Activity and Mobility Promotion (AMP)TM*.

This website provides details on an interprofessional program support hospitals and healthcare providers that want to change the culture of patient immobility, providing frontline caregivers and hospital leaders with the tools and support needed to design and implement structured quality improvement processes to successfully increase patient activity and mobility.

Obesity

Musich, S., MacLeod, S., Bhattarai, G.R., Wang, S.S., Hawkins, K., Bottone, F. G., Jr., & Yeh, C.S. (2016). The impact of obesity on health care utilization and expenditures in a Medicare supplement population. *Gerontology & Geriatric Medicine*, 2. <https://doi.org/10.1177/2333721415622004>

Older people with obesity were significantly more likely to incur inpatient admissions and orthopedic procedures due to chronic conditions and poor health status. Obesity-related expenditures associated with medical management are largely preventable by interventions that target lifestyle modifications and weight management.

Porter Starr, K.P., McDonald, S.R., Weidner, J.A., & Bales, C.W. (2016). Challenges in the management of geriatric obesity in high risk populations. *Nutrients*, 8(5), 262. <https://doi.org/10.3390/nu8050262>

The article provides the characteristics of obesity in the frail older population in various settings. It also identifies the many gaps in knowledge where future study is urgently needed.

Web Links

Georgetown University, McCourt School of Public Policy, Health Policy Institute. (n.d.). *Obesity Among Older Americans*.

This is the second set of Data Profiles in the series, *Challenges for the 21st Century: Chronic and Disabling Conditions*. The article provides data about the trend of obesity, disability, depression, lifestyle, medical expenditures, and chronic conditions in older people.

Palliative Care

Aslakson, R., Dy, S.M., Wilson, R.F., Waldfogel, J.M., Zhang, A., Isenberg, S.R., ... Robinson, K.A. (2017). *Assessment tools for palliative care*. Technical Brief No. 30, AHRQ Publication No. 14-17-EHC007-EF. Agency for Healthcare Research and Quality. <https://www.ncbi.nlm.nih.gov/books/NBK447774/?report=reader>

Assessment tools for palliative care are helpful for providers. This publication provides an overview of more than 150 assessment tools addressing several domains of palliative care.

DeLisser, H.M. (2010). How I conduct the family meeting to discuss the limitation of life-sustaining interventions: A recipe for success. *Blood*, 116(10), 1648-1654. <https://doi.org/10.1182/blood-2010-03-277343>

The meeting with the family of a terminally ill, hospitalized patient with advanced cancer or hematologic disease where limitations of life-sustaining interventions are discussed can be a challenge. This article focuses on how to speak effectively to families about life-sustaining treatments for a dying patient who lacks decision-making capacity.

Kelley, A.S., & Morrison, R.S. (2015). Palliative care for the seriously ill. *New England Journal of Medicine*, 373(8), 747-755. <https://doi.org/10.1056/NEJMra1404684>

Palliative care focuses on improving the quality of life for persons with serious illness and their families. This specialty has undergone substantial growth and change, including an expanded evidence base, new care delivery models, innovative payment mechanisms, and increasing public and professional awareness.

Reville, B., & Foxwell, A.M. (2017). Competency milestones: Guidelines for advanced practice palliative nurses. *Journal of Hospice & Palliative Nursing*, 19(4), 339-342. <https://doi.org/10.1097/NJH.0000000000000352>

Advanced practice nurses with specialty-level skills in hospice and palliative care are urgently needed to optimize care delivery for Americans with advanced serious illness. This article presents advanced practice palliative care nurse competency milestones from novice to specialist.

Web Links

American Association of Colleges of Nursing. (2021). [End-of-Life Nursing Education Consortium \(ELNEC\)](#).

The ELNEC project is a national education initiative whose mission is to improve palliative care within the United States and internationally. This site, through the American Association of Colleges of Nursing, provides training and educational materials for those wishing to become more informed on end-of-life and palliative care topics.

Hospice Foundation of America. (2020). [Starting the Conversation](#).

This website provides tools for patients, providers, and loved ones to start the conversation surrounding end-of-life preferences.

National Coalition for Hospice and Palliative Care. (2018). [Clinical Practice Guidelines for Quality Palliative Care, 4th Edition](#).

These guidelines aim to improve access to quality palliative care for patients with serious illness, regardless of setting, diagnosis, prognosis, or age. It includes a free downloadable version of the 2018 national guidelines produced by the coalition.

National Comprehensive Cancer Network (NCCN). (2016). [NCCN Clinical Practice Guidelines in Oncology. Adult Cancer Pain \[v.2.2016\]](#).

This network requires registration. For its registered users, it contains numerous cancer treatment guidelines, educational events, and patient resources.

Sanon, M., Pelley, A., Ankula, C., & Chai, E. (2020). [Palliative Care Considerations for Older Adults in the Emergency Department During the COVID-19 Pandemic](#). The Geriatric Emergency Palliative Collaborative.

This article highlights the need to expand palliative care and discussions of palliative care for older adults in the emergency department during the COVID-19 pandemic.

Perioperative Care

Kim, S., Brooks, A.K., & Groban, L. (2014). Preoperative assessment of the older surgical patient: Honing in on geriatric syndromes. *Clinical Interventions in Aging*, 16(10), 13-27. <https://doi.org/10.2147/CIA.S75285>

Adequate screening of physiologic and cognitive reserves in older patients scheduled for surgery could identify at-risk, vulnerable elders and enable proactive perioperative management strategies (e.g., strength, balance, and mobility pre-habilitation) to reduce adverse postoperative outcomes and readmissions.

Knittel, J.G., & Wildes, T.S. (2016). Preoperative assessment of geriatric patients. *Anesthesiology Clinics*, 34(1), 171-183. <https://doi.org/10.1016/j.anclin.2015.10.013>

Special consideration is required for the older surgical patient in the perioperative period because of the prevalence of co-morbid diseases, functional impairments, and other deficits. Comprehensive preoperative evaluation strategy is recommended to identify and address these issues.

Oresanya, L.B., Lyons, W.L., & Finlayson, E. (2014). Preoperative assessment of the older patient: A narrative review. *JAMA*, 311(20), 2110-2120. <https://doi.org/10.1001/jama.2014.4573>

Surgery in older patients often poses risks of death, complications, and functional decline. Prior to surgery, evaluations of health-related priorities, realistic assessments of surgical risks, and individualized optimization strategies are essential.

Partridge, J.S.L., Harari, D., & Dhesi, J.K. (2012). Frailty in the older surgical patient: A review. *Age and Ageing*, 41(2), 142-147. <https://doi.org/10.1093/ageing/afr182>

This review describes preoperative assessment and current definitions of frailty, discusses available methods of assessing frailty, the impact of frailty on the older surgical population, and the emerging potential for modification of this important syndrome.

Web Links

American College of Surgeons (ACS). (n.d.). [Optimal Preoperative Assessment of the Geriatric Surgical Patient: Best Practice Guidelines](#). National Surgical Quality Improvement Program (NSQIP) & the American Geriatrics Society (AGS).

Recognizing the unique needs of the aging surgical populace, the ACS NSQIP and the AGS partnered to construct best practice guidelines focused on perioperative care of the older surgical patient. These guidelines summarize evidence-based recommendations for improving preoperative assessment because this is essential in providing quality care to these patients.

American College of Surgeons (ACS). (n.d.). [Optimal Perioperative Management of the Geriatric Patient: Best Practices Guideline](#). National Surgical Quality Improvement Program (NSQIP) & the American Geriatrics Society (AGS).

The ACS NSQIP and the AGS provide a set of expert recommendations to help healthcare professionals manage older adults during the perioperative period.

American Geriatrics Society (AGS). (2015). [Optimal Perioperative Management of the Geriatric Patient](#).

The AGS provides these free clinical guidelines to improve perioperative management of the older adult.

American Geriatrics Society (AGS). (2014). [American Geriatrics Society Clinical Practice Guideline for Post-operative Delirium in Older Adults](#).

The AGS provides these free guidelines for providers to aid in the reduction in postoperative delirium in older adults.

Pressure Injury and Ulcer

Qaseem, A., Humphrey, L.L., Forcica, M.A., Starkey, M., & Denberg, T.D. (2015). Treatment of pressure ulcers: A clinical practice guideline from the American College of Physicians. *Annals of Internal Medicine*, 162(5), 370-379. <https://doi.org/10.7326/M14-1568>

This article presents guidelines to present evidence and provide clinical recommendations based on the comparative effectiveness of treatments of pressure ulcers. It addresses multiple aspects, such as prevention, protection of the wound, promotion of tissue healing, adjunctive therapies, and consideration for surgical repair.

Web Links

Agency for Healthcare Research and Quality (AHRQ). (2009). [Pressure Ulcer Prevention Pathway](#).

This resource was developed in conjunction with the New Jersey Hospital Association Pressure Ulcer Collaborative. The tool can be used by the hospital unit team to train staff on best practice to prevent pressure ulcers.

National Pressure Injury Prevention Advisory Panel (NPIAP). (2021). [NPIAP Resources: Free Resources](#).

The NPIAP is dedicated to improving patient outcomes in pressure injury prevention and treatment through public policy, education, and research. It also serves as a resource for healthcare professionals, government, the public, and healthcare agencies.

Duke University, School of Nursing. (n.d.). [Turn Everyone and Move for Ulcer Protection](#) (TEAM-UP).

This study website has numerous pieces of helpful information related to pressure injury/ulcer prevention.

Wound Care Education Institute. (2021). [Wound Central](#).

The website has a plethora of web links to free resources for many different types of ulcers.

Pulmonary

Advance/End-Stage Chronic Obstructive Pulmonary Disease (COPD)

Chen, Y.W.R., Leung, J.M., & Sin, D.D. (2016). A systematic review of diagnostic biomarkers of COPD exacerbation. *PLOS ONE* 11(7), e0158843. <https://doi.org/10.1371/journal.pone.0158843>

This document reviews the use of biomarkers, such as C-reactive protein (CRP), interleukin-6 (IL-6), and tumor necrosis factor-alpha (TNF- α) to diagnose COPD exacerbations and quality of biomarkers.

Martinez, F.J., Mannino, D., Leidy, N.K., Malley, K.G., Bacci, E.D., Barr, R.G., ... Yawn, B.P. (2017). A new approach for identifying patients with undiagnosed chronic obstructive pulmonary disease. *American Journal of Respiratory and Critical Care Medicine*, 195(6), 748-756. <https://doi.org/10.1164/rccm.201603-0622OC>

This article describes a tool for identifying undiagnosed COPD requiring treatment. The CAPTURE tool with peak expiratory flow can identify patients with COPD needing therapy initiation. CAPTURE: Chronic obstructive pulmonary disease Assessment in Primary care To identify Undiagnosed Respiratory disease and Exacerbation risk; COPD: chronic obstructive pulmonary disease.

Mirza, S., Clay, R.D., Koslow, M.A., & Scanlon, P.D. (2018). COPD guidelines: A review of the 2018 GOLD report. *Mayo Clinic Proceedings*, 93(10), 1488-1502. <https://doi.org/10.1016/j.mayocp.2018.05.026>

This document is a summary of the consensus report of the Global Strategy for the Diagnosis, Management, and Prevention of COPD 2018. It incorporates the latest evidence for implementation of effective care for COPD.

Wedzicha, J.A., Miravittles, M., Hurst, J.R., Calverley, P.M., Albert, R.K., Anzueto, A., ... & Sliwinski, P. (2017). Management of COPD exacerbations: A European Respiratory Society/American Thoracic Society Guideline. *European Respiratory Journal*, 49(3). <https://doi.org/10.1183/13993003.00791-2016>

This document provides clinical recommendations for treating COPD exacerbations including use of noninvasive mechanical ventilation, conditional recommendations for steroids, antibiotics, and pulmonary rehabilitation.

Web Links

Antibiotic Antibioqram

This interactive website provides information on antibiotics and the organisms they impact.

Centers for Disease Control and Prevention (CDC). (2020). [COPD Symptoms, Diagnosis, and Treatment](#).

This website from the CDC provides an overview of symptoms, diagnosis, and treatment for COPD.

American Lung Association. (2021). [Treating COPD](#).

This website provides guidance from the American Lung Association on treating COPD.

The Medical Company. (2020). [Pulmonary Function Tests](#).

This website describes how a pulmonary function test aids in the diagnosis and treatment of COPD.

Global Initiative for Chronic Obstructive Lung Disease (GOLD). (2018). *COPD Standard*.

This website highlights guidelines, provides reports, and pocket guides for the management of COPD.

GlaxoSmithKline Services Unlimited. (2018). *The COPD Assessment Test*.

Understanding COPD is essential for healthcare providers. This website provides an assessment to determine areas that need strengthening.

Sepsis

Martín, S., Pérez, A., & Aldecoa, C. (2017). Sepsis and immunosenescence in the elderly patient: A review. *Frontiers in Medicine*, 4(20). <https://doi.org/10.3389/fmed.2017.00020>

This article focuses on risk factors, age-related pathophysiologic mechanisms, and immunologic events that impair host antimicrobial defense in geriatric patients with septic shock as well as findings regarding clinical impact, therapeutic strategies, and prognosis in older patients with sepsis.

Peach, B.C., Garvan, G.J., Garvan, C.S., & Cimiotti, J.P. (2016). Risk factors for urosepsis in older adults: A systematic review. *Gerontology and Geriatric Medicine*, 2. <https://doi.org/10.1177/2333721416638980>

This article is a literature review that utilized STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) criteria and were scored on a 4-point Likert-type scale which evaluated factors that predispose older adults to urosepsis and urosepsis-related mortality.

Rhodes, A., Evans, L.E., Alhazzani, W., Levy, M.M., Antonelli, M., Ferrer, R., ... Dellinger, R.P. (2017). Surviving sepsis campaign: International guidelines for management of sepsis and septic shock: 2017. *Critical Care Medicine*, 45(3), 486-552. https://core.ac.uk/reader/191340192?utm_source=linkout

This article reviews the most up-to-date sepsis guidelines, which include current definition, diagnostic criteria, and treatment guidelines. It also reviews supportive care measures, including mechanical ventilation, sedation and analgesia, glucose control, and renal replacement therapy.

Web Links

Centers for Disease Control and Prevention. (n.d.) *Get Ahead of Sepsis*.

Sepsis is the body's extreme response to an infection. This website is part of a national effort to improve early recognition and treatment of sepsis, as well as prevent infections that can lead to sepsis.

Sepsis Alliance. (2021). *What is Sepsis?*

Sepsis can lead to tissue damage, organ failure, and death. This website provides information and resources for medical professionals, families, and patients.

Urosepsis

Dreger, N.M., Degener, S., Ahmad-Nejad, P., Wöbker, G., & Roth, S. (2015). Urosepsis – Etiology, diagnosis, and treatment. *DeutschesArzteblatt International*, 112(49), 837-848. <https://doi.org/10.3238/arztebl.2015.0837>

This article reviews urosepsis and identifies risk factors and common causes. Additionally, it reviews the critical importance for early diagnosis and treatment of urosepsis.

Peach, B.C., Garvan, G.J., Garvan, C.S., & Cimiotti, J.P. (2016). Risk factors for urosepsis in older adults: A systematic review. *Gerontology and Geriatric Medicine*, 2, 1-7. <https://doi.org/10.1177/2333721416638980>

This article is a literature review that utilized STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) criteria. Scored on a 4-point Likert-type scale, factors that predispose older adults to urosepsis and urosepsis-related mortality were evaluated.

Sleep

Cooke, J.R., & Ancoli-Israel, S. (2011). Normal and abnormal sleep in the elderly. In *Handbook of clinical neurology* (Vol. 98, pp. 653-665). Elsevier. <https://doi.org/10.1016/B978-0-444-52006-7.00041-1>

This resource provides an overview of both normal and abnormal sleep patterns in the aging adult. It also reviews the impact of sleep disorders on circadian rhythms and delirium, along with measures that can improve sleep.

Sterniczuk, R., Rusak, B., & Rockwood, L. (2014). Sleep disturbance in older ICU patients. *Clinical Interventions in Aging*, 9, 969-977. <https://doi.org/10.2147/CIA.S59927>

Sleep disturbance and abnormal sleep-wake cycles are commonly reported in seriously ill older patients in the intensive care unit. Little is known regarding the effect sleep disturbance has on health status in the oldest of old (80+ years). This age group has diminishing physiological reserve and increasing prevalence of frailty, and is at greater risk of adverse health outcomes, such as cognitive decline and mortality.

Suzuki, K., Miyamoto, M., & Hirata, K. (2017). Sleep disorders in the elderly: Diagnosis and management. *Journal of General and Family Medicine*, 18(2), 61-71. <https://doi.org/10.1002/jgf2.27>

The authors address multiple etiologies that contribute to insomnia in the elderly. Attention is also directed to the proper diagnosis and management of these common disorders.

Stroke

Hemphill, J.C., III, Greenberg, S.M., Anderson, C.S., Becker, K., Bendok, B.R., Cushman, M., ... Woo, D. (2015). Guidelines for the management of spontaneous intracerebral hemorrhage: A guideline for healthcare professionals from the American Heart Association/American Stroke Association.

Stroke, 46(7), 2032-2060. <https://doi.org/10.1161/STR.0000000000000069>

The guideline provides current, comprehensive, and evidence-based recommendations for the diagnosis and treatment of spontaneous intracerebral hemorrhage.

Powers, W.J., Rabinstein, A.A., Ackerson, T., Adeoye, O.M., Bambakidis, N.C., Becker, K., ... Tirschwell, D.L. (2019). Guidelines for the early management of patients with acute ischemic stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*, 50(12), e344-e418. <https://doi.org/10.1161/STR.0000000000000211>

The guideline provides up-to-date comprehensive recommendations for clinicians caring for adult patients with acute ischemic stroke.

Web Links

Cleveland Clinic. (2020). [Mechanical Thrombectomy](#).

This short video provides basic information about mechanical thrombectomy for a treatment of acute ischemic stroke caused by a large vessel occlusion.

Genentech. (2021). [Activase® Alteplase](#). A recombinant tissue plasminogen activator.

The website provides detailed clinical information about IV Activase (Alteplase or tPA) for acute ischemic stroke.

MDCalc. (2021). [Modified Rankin Scale for Neurologic Disability - MDCalc](#)

The scale measures the degree of disability or dependence in the daily activities of people who have suffered from a stroke or other causes of neurological disabilities. It is important to determine and clarify the score of the pre-stroke (or neurological event) as the patient may or may not qualify for stroke treatments, such as IV tPA and mechanical thrombectomy in hyperacute phase.

National Institute of Neurological Disorders and Stroke. Stroke scale and related information. (2019). [The NIH Stroke Scale](#) (NIHSS).

NIHSS stroke scale is a tool used by trained healthcare providers to objectively quantify the impairment caused by stroke.

Trauma

American College of Surgeons. (2017). [Trauma Quality Improvement Program: Palliative Care Best Practices Guidelines](#).

These guidelines focus on the role of primary palliative to trauma patients and their families.

Falls/Hip Fractures

Carpintero, P., Caeiro, J.R., Carpintero, R., Morales, A., Silva, S., & Mesa, M. (2014). Complications of hip fractures: A review. *World Journal of Orthopedics*, 5(4), 402-411. <https://doi.org/10.5312/wjo.v5.i4.402>

The authors review common complications experienced by the geriatric population following the incidence and repair of a hip fracture. A system-by-system approach is discussed, and information and images on various repair options for hip fractures are provided.

Griffiths, R., Babu, S., Dixon, P., Freeman, N., Hurford, D., Kelleher, E., ... White, S. (2021). Guideline for the management of hip fractures 2020: Guideline by the Association of Anaesthetists. *Anaesthesia*, 76(2), 225-237. <https://doi.org/10.1111/anae.15291>

The Association of Anaesthetists convened an interprofessional panel to update the guidelines for the perioperative management of hip fractures.

Roberts, K.C., Brox, W.T., Jevsevar, D.S., & Sevarino, K. (2015). Management of hip fractures in the elderly. *Journal of the American Academy of Orthopaedic Surgeons*, 23(2), 131-137. <https://doi.org/10.5435/JAAOS-D-14-00432>

This document provides clinical practice guidelines for treatment and management of hip fractures in the elderly population. These guidelines are based on current best evidence and contain 25 recommendations, including diagnosis and treatment.

Web Links

Agency for Healthcare Research and Quality. (2018). [Preventing Falls in Hospitals](#).

This toolkit focuses on overcoming the challenges associated with developing, implementing, and sustaining a fall prevention program.

American College of Sports Medicine. (2020). [Exercise is Medicine®: A Global Health Initiative](#).

This website provides resources for healthcare professionals to promote physical activity among older adults.

Centers for Disease Control and Prevention. (2020). [Preventing Falls: A Guide to Implementing Effective Community-Based Fall Prevention Programs](#).

This website provides resources to organizations to implement evidence-based fall prevention programs.

Centers for Disease Control and Prevention. (2020). [STEADI: Older Adult Fall Prevention](#).

The CDC developed a resource guide for healthcare providers known as STEADI (Stopping Elderly Accidents, Deaths, and Injuries) to reduce accidents, deaths, and injuries in older adults.

National Council on Aging. (2020). [*Falls Prevention for Older Adults*](#).

Falls are the leading cause of injuries, both fatal and non-fatal, for older adults. This website provides lifestyle adjustments, programs, and community partnerships available to reduce the number of falls among this high-risk population. This website also includes evidence-based fall prevention programs.

National Institute on Aging. (2017). [*Prevent Falls and Fractures*](#).

This website reviews the causes and risk factors for falls as well as steps to prevent falls.

The Geriatric Emergency Department Collaborative. (2021). [*Management of Older Adult Falls and Mobility in the Emergency Department*](#).

Falls are common in older adults. Promoting safe mobility is a key goal of emergency department (ED) discharge. This toolkit provides helpful resources for making changes in the ED to enhance the assessment of older patients who have fallen and to ensure safe mobility post-discharge. Resources, tools, and links to the evidence supporting implementation are included.