
Certificate in Orthogeriatrics and Fracture Management

Prevention of Falls and Fractures.

Prevention of Falls and Fractures: Key Terms and Vocabulary

Preventing falls and fractures is a crucial aspect of orthogeriatrics and fracture management. Understanding key terms and vocabulary related to this topic is essential for healthcare professionals to provide effective care and support to patients at risk. In this course, we will explore various terms and concepts that are fundamental to the prevention of falls and fractures.

Falls:

Falls are a common occurrence among older adults and can have serious consequences, including fractures, head injuries, and loss of independence. Falls can be caused by various factors, such as poor balance, muscle weakness, vision problems, medication side effects, and environmental hazards. Preventing falls involves assessing and addressing these risk factors to reduce the likelihood of falls occurring.

Fractures:

Fractures are breaks in the bone that can result from falls or other forms of trauma. Fractures are particularly common in older adults due to age-related changes in bone density and strength. The most common types of fractures in older adults are hip fractures, wrist fractures, and vertebral fractures. Preventing fractures involves not only reducing the risk of falls but also ensuring optimal bone health through nutrition, exercise, and medication management.

Orthogeriatrics:

Orthogeriatrics is a subspecialty of geriatric medicine that focuses on the care of older adults with musculoskeletal conditions, particularly fractures. Orthogeriatricians are experts in managing the complex medical and social needs of older adults with fractures, including preoperative assessment, surgical management, postoperative care, and rehabilitation. The goal of orthogeriatrics is to optimize outcomes for older adults with fractures and prevent complications such as delirium, pressure ulcers, and functional decline.

Fall Risk Assessment:

Fall risk assessment is a critical component of fall prevention strategies. Healthcare professionals use various tools and assessments to identify individuals at risk of falling and implement targeted interventions to reduce their risk. Common fall risk assessment tools include the Timed Up and Go test, the Berg Balance Scale, and the Morse Fall Scale. Fall risk assessment should be conducted regularly, especially in older adults or individuals with mobility impairments.

Fracture Risk Assessment:

Fracture risk assessment is essential for identifying individuals at risk of osteoporotic fractures, particularly in postmenopausal women and older adults. Healthcare professionals use tools such as the FRAX (Fracture Risk Assessment Tool) to estimate an individual's 10-year risk of major osteoporotic fractures and hip fractures. Fracture risk assessment helps guide decisions regarding bone health interventions, such as pharmacological treatment, calcium and vitamin D supplementation, and lifestyle modifications.

Osteoporosis:

Osteoporosis is a common bone disease characterized by low bone mass and deterioration of bone tissue, leading to increased bone fragility and susceptibility to fractures. Osteoporosis is particularly prevalent in postmenopausal women due to hormonal changes that affect bone density. Prevention and management of osteoporosis involve a multifaceted approach, including calcium and vitamin D supplementation, weight-bearing exercise, fall prevention strategies, and pharmacological treatment with bisphosphonates or other anti-resorptive agents.

Bone Mineral Density (BMD):

Bone mineral density (BMD) is a measure of bone strength and density, typically assessed using dual-energy X-ray absorptiometry (DXA) scans. Low BMD is a significant risk factor for osteoporotic fractures, as bones become more fragile and prone to fracture. Monitoring BMD through regular DXA scans is essential for assessing bone health and guiding treatment decisions for osteoporosis.

Fall Prevention Strategies:

Fall prevention strategies encompass a range of interventions aimed at reducing the risk of falls in older adults and individuals with mobility impairments. These strategies include environmental modifications (e.g., removing tripping hazards, improving lighting), exercise programs to improve strength and balance, medication review to reduce fall-inducing side effects, and assistive devices such as walking aids and grab bars. Multifactorial fall prevention programs that address multiple risk factors have been shown to be most effective in reducing falls.

Fragility Fractures:

Fragility fractures are fractures that occur as a result of low-energy trauma, such as a fall from standing height. Fragility fractures are common in older adults with osteoporosis and are associated with significant morbidity and mortality. Preventing fragility fractures involves addressing underlying risk factors for osteoporosis, ensuring bone health through lifestyle modifications and pharmacological treatment, and implementing fall prevention strategies to reduce the risk of falls.

Delirium:

Delirium is a common complication in older adults hospitalized for fractures, particularly hip fractures. Delirium is characterized by acute confusion, disorientation, and changes in behavior and cognition. Delirium can have serious consequences, including increased morbidity, prolonged hospital stays, and functional decline. Preventing delirium in older adults with fractures involves early identification of risk factors, such as cognitive impairment and sensory deficits, and implementing strategies to prevent delirium,

such as orientation techniques, early mobility, and minimization of sedative medications.

Pressure Ulcers:

Pressure ulcers, also known as bedsores or pressure sores, are a common complication in older adults with fractures, particularly those who are immobile or bedridden. Pressure ulcers result from prolonged pressure on the skin and underlying tissues, leading to tissue damage and skin breakdown. Preventing pressure ulcers in older adults with fractures involves regular skin assessments, repositioning to relieve pressure, using pressure-relieving devices such as cushions and mattresses, and maintaining optimal skin hygiene and moisture.

Functional Decline:

Functional decline is a common consequence of fractures in older adults, particularly hip fractures, and can result in loss of independence and reduced quality of life. Functional decline may manifest as difficulty with activities of daily living (ADLs), reduced mobility, and increased reliance on caregivers. Preventing functional decline in older adults with fractures involves early mobilization, physical therapy to improve strength and balance, and rehabilitation to regain functional abilities. Multidisciplinary care teams, including orthogeriatricians, physiotherapists, and occupational therapists, play a crucial role in preventing and managing functional decline.

Polypharmacy:

Polypharmacy is the use of multiple medications by an individual, often with complex medication regimens and potential drug interactions. Polypharmacy is common in older adults with multiple comorbidities, including those at risk of falls and fractures. Polypharmacy can increase the risk of medication-related side effects, such as dizziness, sedation, and impaired balance, which can contribute to falls. Preventing polypharmacy-related falls and fractures involves medication review, deprescribing unnecessary medications, and optimizing medication management to minimize fall-inducing side effects.

Geriatric Syndromes:

Geriatric syndromes are common clinical conditions in older adults that are multifactorial in nature and often involve interactions between medical, functional, cognitive, and social factors. Geriatric syndromes commonly seen in older adults with fractures include falls, delirium, incontinence, and malnutrition. Preventing geriatric syndromes in older adults with fractures involves comprehensive geriatric assessment, individualized care plans, and multidisciplinary interventions to address the complex needs of older adults with fractures.

Fracture Liaison Service (FLS):

A Fracture Liaison Service (FLS) is a specialized healthcare service that aims to prevent secondary fractures in individuals who have experienced a fragility fracture. FLSs typically involve a multidisciplinary team of healthcare professionals, including orthogeriatricians, nurses, physiotherapists, and pharmacists, who work together to assess fracture risk, provide education and support, and implement interventions to prevent future fractures. FLSs play a crucial role in improving the continuity of care for individuals with fragility

fractures and reducing the burden of osteoporosis-related fractures.

Comprehensive Geriatric Assessment (CGA):

Comprehensive Geriatric Assessment (CGA) is a multidimensional, interdisciplinary diagnostic process used to determine the medical, functional, cognitive, and social needs of older adults with complex health conditions, such as fractures. CGA involves a systematic evaluation of the older adult's health status, including physical and cognitive function, medication use, nutritional status, and psychosocial factors. CGA helps identify individualized care needs, develop tailored care plans, and optimize outcomes for older adults with fractures.

Multidisciplinary Care Team:

A multidisciplinary care team is a group of healthcare professionals from various disciplines, such as medicine, nursing, physiotherapy, occupational therapy, and social work, who work together to provide comprehensive care for older adults with fractures. Multidisciplinary care teams collaborate to assess and address the complex medical, functional, and psychosocial needs of older adults with fractures, ensuring holistic and individualized care. Effective communication, coordination, and shared decision-making are essential components of a successful multidisciplinary care team.

Rehabilitation:

Rehabilitation is a crucial component of the care continuum for older adults with fractures, helping them regain functional abilities, mobility, and independence after a fracture. Rehabilitation may include physical therapy to improve strength and balance, occupational therapy to facilitate activities of daily living, and speech therapy for communication and swallowing difficulties. Early rehabilitation following a fracture can prevent complications such as muscle weakness, joint stiffness, and functional decline, promoting recovery and optimal outcomes for older adults.

Exercise Prescription:

Exercise prescription involves recommending specific exercises and physical activities tailored to an individual's needs and abilities to improve strength, balance, and mobility. Exercise is an essential component of fall and fracture prevention strategies, as it can help improve bone health, muscle strength, and coordination, reducing the risk of falls and fractures. Healthcare professionals, such as physiotherapists and exercise physiologists, prescribe individualized exercise programs based on the individual's medical history, functional status, and goals for physical activity.

Medication Management:

Medication management is the process of assessing, prescribing, monitoring, and optimizing medication use to ensure safe and effective treatment for older adults with fractures. Medication management in older adults with fractures involves reviewing all medications for potential interactions, side effects, and fall-inducing properties, adjusting dosages as needed, and deprescribing unnecessary medications. Collaborative medication management by healthcare professionals, including pharmacists, physicians, and nurses, is essential for preventing medication-related falls and fractures.

Home Safety Assessment:

A home safety assessment is an evaluation of an individual's home environment to identify potential hazards and risks that may contribute to falls and fractures. Home safety assessments involve assessing factors such as lighting, flooring, furniture arrangement, bathroom safety, and accessibility of assistive devices. Recommendations for home modifications, such as installing grab bars, removing rugs, and improving lighting, can help create a safer home environment for older adults at risk of falls and fractures.

Adaptive Aids:

Adaptive aids are devices and equipment designed to assist older adults with mobility, balance, and activities of daily living to reduce the risk of falls and fractures. Common adaptive aids include walking aids (e.g., canes, walkers), grab bars, raised toilet seats, shower chairs, and reachers. Adaptive aids help older adults maintain independence, improve safety, and prevent falls by providing support and stability during daily activities. Healthcare professionals can recommend and demonstrate the use of adaptive aids to older adults to promote safety and mobility.

Health Literacy:

Health literacy is the ability to obtain, understand, and use health information to make informed decisions about one's health and healthcare. Health literacy is essential for older adults with fractures to understand their condition, treatment options, and self-care strategies. Healthcare professionals play a crucial role in promoting health literacy by providing clear, accessible information, using plain language, visual aids, and written materials, and encouraging active participation and shared decision-making in the care process.

Social Support:

Social support is the emotional, practical, and instrumental assistance provided by family members, friends, caregivers, and community resources to older adults with fractures. Social support plays a vital role in promoting recovery, well-being, and quality of life for older adults undergoing treatment for fractures. Social support may include assistance with activities of daily living, transportation to medical appointments, companionship, and emotional encouragement. Building a strong social support network is essential for older adults with fractures to stay connected, engaged, and resilient during the recovery process.

Advance Care Planning:

Advance care planning is the process of discussing and documenting an individual's preferences for future medical care, including treatment decisions, end-of-life care, and goals of care. Advance care planning is important for older adults with fractures to ensure that their wishes and values are respected in the event of a medical crisis or decline in health. Healthcare professionals can facilitate advance care planning discussions, help older adults make informed decisions about their care, and document their preferences in advance directives, such as living wills and healthcare proxies.

Challenges in Fall and Fracture Prevention:

Preventing falls and fractures in older adults presents several challenges, including the complexity of managing multiple risk factors, the need for interdisciplinary collaboration, and the limitations of current fall

prevention strategies. Common challenges in fall and fracture prevention include underreporting of falls, lack of awareness of fall risk factors, inadequate access to fall prevention programs, and barriers to implementing evidence-based interventions. Overcoming these challenges requires a multifaceted approach that addresses individual, environmental, and systemic factors contributing to falls and fractures in older adults.

Conclusion:

In conclusion, understanding key terms and vocabulary related to the prevention of falls and fractures is essential for healthcare professionals working in orthogeriatrics and fracture management. By familiarizing themselves with terms such as falls, fractures, osteoporosis, geriatric syndromes, and rehabilitation, healthcare professionals can enhance their knowledge and skills in preventing and managing falls and fractures in older adults. Effective fall and fracture prevention strategies involve comprehensive assessments, individualized care plans, interdisciplinary collaboration, and a holistic approach to supporting older adults at risk. By addressing the complex medical, functional, and psychosocial needs of older adults with fractures, healthcare professionals can improve outcomes, promote recovery, and enhance quality of life for this vulnerable population.