ices are provided to a patient with a terminal illness when the phase of their illness is critical to appropriate care planning, the most important at this phase is a shift to comfort care. Hospice care during the last days and hours of life often have unrelieved physical suffering, as well as emotional, spiritual, and social distress. Recognizing that a person is entering the imminently dying or terminal phase of their illness is critical to appropriate care planning, the most important at this phase is a shift to comfort care. Hospice care focuses on the management of pain and other symptoms while addressing other forms of distress. In a growing geriatric population, hospice care during the last days and hours of life, can help individuals have a “good death” and lead to higher family satisfaction with the quality of care the patient receives. The goal is to make the final days of life as comfortable as possible and Geriatricians are the best candidates to make this happen.

Geriatric services in Bahrain
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Bahrain is a small country, yet it has good integrated health services for elderly. The geriatric services in Bahrain covers primary, secondary and tertiary preventive levels through 4 domains of inpatient and outpatient acute, sub acute and long term care facilities, plus a developing home care system. In the presentation, the services will be highlighted and explained. The use of multidimensional assessment and multidisciplinary team management at all levels will be explained. And the coordination among the 4 domains will be also discussed as an example of how to conduct an integrated geriatric health care on a small nation level that can be implemented anywhere on larger and smaller scales.

GMAP: geriatric multidisciplinary approach for pressure ulcer management
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Background: Pressure ulcers are one of the most common complications of ICU prolonged stay. Patients who develop pressure ulcers experience a wide range of morbidities as well as an increased risk of mortality. The occurrence of pressure ulcers is considered an indicator of health care quality and safety. Incidence in intensive care units ranges from 3% to 50% according to published data. In November 2017, Incidence of hospital acquired pressure ulcers in geriatric ICU in Ain Shams University hospitals was 31%.

Objective: To study the effect of Geriatric Multidisciplinary Approach in pressure ulcer management, in the period between end of December 2017 till end of February 2018, in Geriatric ICU in Ain Shams University Hospitals.

Methods: A multidisciplinary team including Geriatric ICU Residents, Nursing staff, Dietician and a General surgeon was organized and supervised by: an ICU management team member, a senior resident physician and a head nurse. The multidisciplinary team performed pressure ulcer risk assessment tool (Braden Scale) on admission, nutritional status assessment, and assessment tool for effective nursing care for all patients admitted to the ICU in this period, as well as education for medical and nursing staff. The supervising committee performed daily surveillance to ensure effective system implementation, to detect incidence of new ulcers and ensure their adequate management. The incidence rate, site and grade of new emerging pressure ulcers, as well as Braden scale and list of comorbidities is collected by the supervising committee.
Infectious diseases, inflammaging and antibiotic use in elderly; critical appraisal of real-life practice

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Inflammaging and immunosenesence are very hot topics recently and attract many researchers to explore those areas especially with the era of aging population and the world getting old.

The aim of this workshop to discuss, explore and understand different aspects of infectious diseases and inflammation and sepsis among elderly population in various clinical settings. The workshop session will have three different case scenarios teasing the audience to express their thoughts and make a conclusion at the end of discussion to improve and enhance their real life practice.

The first case is about, how older individuals demonstrate changes in their immune responses to infections. This case will generate discussion on the clinical challenges posed by immunosenesence. The second one, will discuss how older individuals are more likely to suffer from infections caused by antimicrobial resistant pathogens. This case will focus on the prevalence of AMR pathogens in older people and on clinical approached to meet this challenge and recent biomarkers of antibiotic effectiveness. The last one will explore treatment of Hepatitis C (HCV) which evolved rapidly in recent years. This case will cover the management of HCV in older individuals with atypical presentations of HCV infections and smart approaches to diagnose it.

Osteoporosis in older people and osteogeriatric models of care

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Introduction: Osteoporosis is a condition leading to bone fragility and fractures which lead to much morbidity, mortality and cost to society. The traditional approach to diagnosis is based on bone mineral density threshold definitions for osteoporosis, but more recently fracture prediction tools such as FRAX have been incorporated into treatment guidelines, but these approaches do have their limitations. In the pathogenesis of fracture there are two main determinants: osteoporosis and propensity to falls and interventions can be aimed at these two paradigms.

Osteoporosis: Oral bisphosphonates are the mainstay of osteoporosis treatments. Zoledronic acid is given by an annual intravenous injection and has been shown to reduce vertebral and hip fractures by 70 and 40% respectively at 3 years. Denosumab, a monoclonal antibody which acts on the RANK Ligand pathway has also been shown to be an effective agent in reducing vertebral, non-vertebral and hip fractures. The concept of drug holidays for anti-resorptive treatment has become fashionable due to concerns about the rare side-effects of osteonecrosis of the jaw and atypical sub-trochanteric fractures.

Teriparate is an anabolic agent used in the treatment of osteoporosis. The pivotal trial (FPT) showed that after a median duration of 21 months, new vertebral fractures were reduced significantly by 65% and new non-vertebral fragility fractures by 53%. Subgroup analysis of the pivotal studies showed that there were no significant treatment-by-age interactions for fractures, indicating that the clinical effects of teriparatide were consistent in the older and younger women. New data on combination of teriparatide with either zoleodronic acid and denosumab may lead to a shift in treatment paradigm in the future.

There have been some recent controversies regarding calcium and vitamin D supplements. Recent meta-analysis do suggest a probable reduction in falls and fracture risk with calcium and vitamin D. However some data suggests that calcium (with or without vitamin D) supplements might be associated with increased cardiovascular risk, namely myocardial infarction.

Fall Related Interventions
Fall intervention strategies can be broadly divided into multifactorial and unifactorial.

1. Multifactorial approach
In the Yale FiCSIT study, risk factor modification (including medication review, balance and gait training and improvement in functional skills) led to a significant 31% reduction in falls. The UK PROFET study showed that in the follow up of older people presenting to emergency department with a fall, a structured medical and occupational therapy home assessment produced a sustained and significant reduction in falls of more than 60%. Swedish and German studies have shown that multifactorial approaches can also reduce falls in care home populations.

2. Unifactorial approach
Data from New Zealand suggest that physiotherapist-led, individually targeted exercise programmes can reduce falls and injuries for community dwelling older people. Similar programmes, delivered by nurses, either in general practice or at home can also significantly reduce fall rates by 30% and 46% respectively. Withdrawal of psychotropic medication can significantly reduce the individuals risk of falling; however permanent withdrawal is difficult to achieve. Several studies have shown that Vitamin D can reduce the risk of falls in community dwelling and care home populations. A study of expedited catheter operation compared to normal waiting list controls showed a significant reduction in fall rates of 34% and a significant reduction in fractures of 77%. Early trials using hip protectors to prevent hip fractures after a fall were successful but more