Overview and Syndrome of Geriatric RA TutyKuswardhani
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Introduction

Aging population is a global issue. One concern is a shortage of hospital beds, making it necessary to provide more complex care to the elderly with chronic or comorbid health conditions while they are living at home. At the same time, an aging population also reduces the availability of family caregivers.

The problem is critical in societies, such as Indonesia, where there has been an increasing rate of life expectancy, which means an increasing number of aging population. Based on Susenas (SurveiSosialEkonomiNasional - National Social Economy Survey) data 2014, the number of elderly reached 20.24 millions, equals with 8.03% of Indonesian populations in 2014. This number makes Indonesia become one of the big five of the largest aging population in the world (Central Bureau of Statistic, 2015).

There is also a tradition that children are the primary caregivers for their elderly parents who are no longer independent. The dependency ratio of aged people in Indonesia is 12.7, which shows every 100 adults of productive age have to bear around 13 elderly. The dependency ratio of aged people in rural areas is higher than in the city, 14.09% compares to 11.4% respectively. Most of the aged people are living with their family. Forty two point thirty two percent elders are living with three generations in one house, consist of child/child in law and grandchildren. Elders who are living with core family are as high as 26.8%, while 17.48% elders are living only with their spouse. One thing that has our concern is they who live alone in a house and has to fulfill the meal, medical, and social needs independently are as high as 9.66% (Central Bureau of Statistic, 2015).

The leading chronic conditions among people at ages 65 and older are as follows: hypertension (51.2%), high cholesterol (44.0), heart disease (22.3%), mental illness (21.3%), diabetes (18.8%), arthritis (17.4%), cancer (15.2%), back problems (14.5%), and COPD (14.0%). Sixty-three percent of those age 65 and
older have two or more chronic conditions—multiple chronic conditions. Costs for repeated hospitalizations account for approximately 20% of the annual healthcare budget; however, studies have found that 16% of hospital readmissions were avoidable. In addition, it has been estimated that more than 99% of the elderly over the age of 65 have expressed a desire to stay at home as long as possible. How to care for these elderly effectively and keep them at home as they desire has been very critical in preventing repeated hospital admissions that result in escalating healthcare costs (Central Bureau of Statistic, 2015).

**Home Care**

Home care is a term used for care services by caregivers for elderly in their homes. These caregivers can be categorized as non-professional and professional caregivers. Each type of caregiver provides care services differently, but they share the common goal of helping elderly individuals remain healthy while living in their own homes and communities (Segal et al, 2014).

1. **Non-professional caregivers**

   Non-professional caregivers include unpaid family caregivers and paid informal caregivers. The unpaid family could be a family member such as a spouse, son or daughter, and/or friends. Paid informal caregivers are typically home care aides, either managed by the family or a commercial or government agency in the community.

2. **Families**

   Family caregivers routinely assist the frail elderly with activities of daily living (ADLs), including bathing/showering, dressing, feeding, toileting, personal hygiene and grooming, transfers and mobility within the home. Caregivers also assist with many instrumental activities of daily living (IADLs), including grocery shopping, housekeeping, preparing meals, managing finances, administering and supervising medications, transportation, and arranging and/or supervising paid services. Family caregivers also monitor the health conditions of the elderly, and when they deem necessary, seek professional assistance or take their loved one to a hospital for more complex care.
3. Home care aides

Home care aides usually only earn a certificate of completion in a short-term home healthcare training program. A typical training involves classroom instruction and professional hands-on training including some hours with patients. The duration of such training is 3-4 weeks. They are supervised by a registered nurse or other medical or social services professional. Their services include monitoring the basic health conditions of the elderly and do wound care and bandaging, in addition to ADL and IADL assistance.

4. Professional caregivers.

Professional caregivers include home health visiting nurses, rehabilitation therapists and healthcare social workers. The therapies comprise physical therapy, speech-language pathology and occupational therapy services. Professional caregivers deliver services at the elder patient's home to help them develop independence with daily activities in a convenient and comfortable setting, allowing families to be closely involved in the recovering/rehabilitation process.

**Day Care**

Day care centers are designed to provide care and companionship for older adults who need assistance or supervision during the day. Programs offer relief to family members and caregivers, allowing them to go to work, handle personal business, or just relax while knowing their relative is well cared for and safe.

The services usually consist of personal care, nursing care, rehabilitation exercise, health education, carer support services, counselling and referral services, meals, also social and recreational activities (Resnick, 2016).

**Respite Care**

Respite care (also known as ‘short-term care’) is a form of support for elderly and their care givers. It gives care giver the opportunity to attend to everyday activities or go on holidays while ensuring the elder’s needs are
supported. Respite care may be given informally by family, friends or neighbours, or by formal respite services.

Respite care may be for a few hours or days or for longer periods, depending on the elder’s needs, the needs of the care giver, and also eligibility and what services are available around the area. It can happen in the elder’s home or at facilities such as an overnight respite cottage (Segal et al, 2014; Resnick, 2016).

**Hospital Care for Elderly**

The elderly use hospitals more than younger patients; they have more admissions to the hospital from the emergency department and more and longer hospital stays, and they use more resources while in the hospital. The comprehensive geriatric care in hospital starts from the emergency department, during hospitalization, until the discharge planning.

A visit to an emergency department may create more stress for the elderly because there are typically no special accommodations for them (eg, quiet rooms, lower beds, extra pillows, indirect lighting). Evaluation of the elderly usually takes longer and requires more diagnostic tests because many elderly patients do not present with clear-cut or typical symptoms and signs of a disorder. Factors that are not apparent (eg, polypharmacy, adverse drug effects) may affect an elderly patient’s presentation. For example, a fall may result from an adverse drug effect (eg, oversedation), hazards in the home, physical problems (eg, poor vision), depression, or chronic alcoholism. Adverse drug effects account for at least 5% of hospital admissions for the elderly.

Only seriously ill elderly patients who cannot be appropriately cared for elsewhere should be hospitalized, because hospitalization can magnify age-related physiologic changes and increase morbidity. Hospitalization also involves confinement, immobility, diagnostic testing, and treatments (particularly changes in drug regimens). When patients are transferred to or from a hospital, drugs are likely to be added or changed, leading to a higher risk of adverse effects. Treatment in hospitals can be dehumanizing and impersonal. Acute hospital care
should last only long enough to allow successful transition to home care, a skilled
nursing facility, or an outpatient rehabilitation program.

The outcome of hospitalization appears to be poorer with increasing age,
although physiologic age is a more important predictor of outcome than
chronologic age. Outcome is better for patients hospitalized because of elective
procedures (eg, joint replacement) than for those hospitalized because of serious
disorders (eg, multisystem organ failure) (Segal et al, 2014):

The following strategies can help reduce functional decline and improve
care of elderly patients (Resnick, 2016):
1. Geriatric interdisciplinary team.
   This team will identify and meet the complex needs of elderly patients and
   watch for and prevent problems that are common among the elderly and that
   may develop or worsen during hospitalization
2. Primary care nurse(one nurse with around-the-clock responsibility for a
   particular patient).
   Her job is to administer the team’s care plan, to monitor response to nursing
   and medical care, and to teach and counsel patients, staff members, and family
   members.
3. Changes in the hospital environment, often made by nurses, eg: to move
disruptive patients into the hall near the nursing station or to change roommates
for a patient.
4. Rooming-in programs for a family member.
   It aims to provide better one-on-one care, to relieve staff members of some
caregiving tasks, to allay patient anxiety (particularly if patients have delirium
or dementia), and to enable a family member to participate actively in the
patient’s recovery
5. Good communication among practitioners
6. Well documented drug regimen
Early mobilization consists of both active and passive, it involves the medical rehabilitation staffs and family member. This program aims to prevent physical deterioration and complication of prolonged immobilization.

8. Discharge planning: to ensure that appropriate care is continued.

**Geriatric Syndrome**

Geriatric syndrome is a term used to describe clinical conditions of elderly people such as frailty, falls / instability until fractures, urinary incontinence, malnutrition, declining mental health and pressure ulcer, which become serious problems in the elderly population.

This discussion will focus on Falls as one of Geriatric Syndrome and more over Morse Scale as the assessment of Falls is available in the enclosure page (Lind et al, 2012).

**Falls**

Aging is a fact and biological phenomenon. Life will end with the aging process and lead to death. Aging is normal phenomenon with physical changes and behavior, happens to everyone when it reaches the age of chronological development (Ward et al, 2010).

The impact of aging is reduced organ functions, such as a decrease in the neurological system, cardiovascular, musculoskeletal and still many more systems. Almost 80% of elderly have at least one chronic problem. Chronic illness can interfere with activities in fulfilling the needs of the bodies. The impact of this functional declining can lead to negative effects on elderly. As an example of functional declining in the elderly is Falls. The incident of fall happened at least once every year and about half of them fall down repeatedly. More than half deaths related to falls occur at home (Van et al, 2011).

Incident of fall occurs as much as 40% in the nursing home annually. Elderly who fall, 20% to 30% suffer serious injuries such as hip fractures or head
trauma. More than 95% of hip fractures are due by fall. Between 8% and 33% of the elderly with hip fracture, dies due within one year of their fracture (Lind et al, 2012; Ward et al, 2010).

After the age of 65, individuals often fall due to environmental conditions, physical and psychological condition. Several factors increase the risk of falling proportioned as one ages: disturbances in visual acuity, impaired cognitive, postural hypotension, cardiac arrhythmias, uncontrolled diabetes symptoms, depression, weakness of the lower extremity gait disturbance. Most of the incident is influenced by several things of the elderly themselves, which is related with the sensory system, central nervous system, cognitive and musculoskeletal (Lind et al, 2012; Van et al, 2011).

Cognitive function becomes one of the factors causing the increasing risk of falls in the elderly. It is caused by impaired cognitive function and decrease the level of concentration, thought processes are not in order, lowers the level of consciousness, perception disorders, sleep disorders, increased or decreased psychomotor activity, disorientation, and impaired remember(Ward et al, 2010; Van et al, 2011).

Risk Factors

There are several factors involved in fall. These factors can be classified into 2(Lind et al, 2012; Ward et al, 2010):

1. Intrinsic factor, consists of local and systemic factor, such as physical and neuropsychiatric condition, the declining of vision and hearing, the changing of neuromuscular, gait, and postural reflex because of aging.
2. Extrinsic factor/ environmental factor, such as medicine taken, walking tools, and unsupportive (dangerous) environment.
Etiology

Usually the etiology of fall in elderly is a result of multiple factors, such as (Lind et al, 2012; Van et al, 2011):

1. Accident
2. Headache and or vertigo
3. Orthostatic hypotension:
   a. Hypovolemia/ low cardiac output
   b. Autonom organ disfunction
   c. Prolonged immobilization
   d. Hypotensive drugs effect
   e. Post prandial hypotension
4. Drugs:
   a. Diuretic/ antihypertension
   b. Tricyclic antidepressant
   c. Sedative
   d. Antipsychotic
   e. Hypoglicemic drugs
   f. Alcohol
5. Specific and acute illness such as:
   a. Cardiovascular:
      i. Arrhythmia
      ii. Aorta stenosis
      iii. Carotid sinus syncope
   b. Neurology:
      i. Transient ischemic attack
      ii. Stroke
      iii. Seizures
      iv. Parkinson
      v. Spinal cord compression because of spondylosis
      vi. Cerebellum disease
6. Idiopathic
7. Syncope (sudden loss of consciousness)
   a. Drop attack
   b. Sudden low blood flow into the brain
   c. Sun burning

**Management**

The aims of the management are to prevent recurrent fall and manage the complication, restoring the best ADL (Activity Daily Living), and restoring the self-confidence of the elderly. The management of fall consists of managing and eliminating the risk factors, etiology, and handling the complication. It needs integrated teamwork of doctors (geriatrician, neurologist, orthopedic surgeon, medical rehabilitation, psychiatrist, etc), sociomedical, architect, and family (Ward et al, 2010; Van et al, 2011).

The management is individualized for each case, because of different factors involved in the accident. If the cause is because of acute illness, the management becomes easier, simple, effective, and could eliminate the cause of fall immediately. But most patients fall because of chronic illness, multifactorial, which need a combination therapies of drugs, rehabilitation, environmental improvement, and habit changing of the elderly. In some cases, it needs intervention to prevent recurrent fall, such as limitation of physical activities and using of walking tools (Lind et al, 2012; Van et al, 2011).

The management of patient with lower extremities weakness and functional declining is focused to improve the muscle strength and endurance, so it could improve the functional status. Unfortunately, there is often a mistake that the rehabilitation is only given shortly after the accident, while this kind of therapy needs to be performed continuously until there is an improvement of muscle strength and functional status. There is a research conducted in the United States to the patients who suffered from fall in one year, aged more than 75 years. The result concluded there was an improvement of muscle strength and endurance.
after 3 months of rehabilitation, means that the longer the exercise, the better the output is (Lind et al, 2012; Ward et al, 2010).

The therapy for patient with declining of gait and balance is focused in handling/eliminating the cause/factor involved in it. The patient is arranged to join the gait training program, strengthening exercise, and getting a walking tool. This rehabilitation program is conducted by a physiotherapist. This program is really helpful for patient with stroke, column femur fracture, arthritis, and parkinsonism (Lind et al, 2012; Van et al, 2011).

Patient with dizziness, the therapy is focused to the cardiovascular problem involved, stopping the drugs considered to cause postural hypotension such as beta blocker, diuretic, antidepressant, etc. There is also one important thing that shouldn’t be forgotten is improvement of the patient’s environment (Ward et al, 2010; Van et al, 2011).

Summary
Every year, population of elderly will increase and usually is followed by problem like Falls. Taking care of them is needed to prosper the population of elderly. All aspect have to be noticed to make elderly feel safe and comfort. Aging is a normal process that is experienced by human being. Aging and impairments cannot be avoided, all we can do is to prepare to deal with it in various ways. Began with knowing what aging is, it will make people ready to deal with their late life. Health care service is really helpful to take care and prosper elderly in their late life. Home care, Respite care, Day care and Hospital Care service is an example of health care service for elderly that provide all needs of elderly and can be a good solution to take care of elderly in this era. However, elderly reserves the right to enjoy their late life and we all have to take care of them until the end of elderly life.
References


## ASSESSMENT OF ADULT FALL RISK (Morse Scale)

<table>
<thead>
<tr>
<th>No.</th>
<th>Evaluation Item</th>
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<th>Time</th>
<th>Score</th>
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<td>Age</td>
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<td>Activity</td>
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<td>Totally help of ADL</td>
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<td>4</td>
<td>History of Falls</td>
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<td>Falls &lt; 1 year</td>
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<td>5</td>
<td>Cognition</td>
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<td>Good Orientation</td>
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<td>Difficult to understand order</td>
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<td>6</td>
<td>Drug and the Use of Medical Tools</td>
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<td>f.</td>
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<td>Comorbiditas</td>
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<td>Post Operation 0 – 24 hours</td>
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### Score Total

- **Low Risk**: 0 – 7
- **High Risk**: 8 – 13
- **Very High Risk**: > 14

### Note:

- **Name / Signature**