



FOCUS ON HEALTH

Multidisciplinary

Self-study CPD activity

Activity Reference Number

G2(25)

Topic

The Ageing population

Article(s)

The aging population General considerations

Profession(s)

Healthcare practitioners

You can complete any one part, or all parts of this activity

Part 1 of this activity is approved for **THREE (3) Clinical** Continuing Education Units (CEU's)

Part 2 of this activity is approved for **THREE (3) Clinical** Continuing Education Units (CEU's)

Part 3 of this activity is approved for **TWO (2) Clinical** Continuing Education Units (CEU's)

The ageing population: General considerations for healthcare practitioners



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1. Introduction

According to the World Health Organisation (WHO), people worldwide live longer. Today, most people can expect to live into their sixties and beyond. The increase in longevity has largely been due to the decline in deaths from cardiovascular disease (CVD), i.e. stroke and ischemic heart disease. But also because of improved health management, effective health interventions and new developments in health care, including medical technology advancements. Other contributors include better nutrition and consumption of high-quality food, decreased environmental hazards, and access to better sanitation. In South Africa, the expansion of health programmes to prevent mother-to-child HIV transmission and to improve access to antiretroviral treatment has significantly contributed to the improvement in life expectancy.

A longer life brings opportunities, not only for older people and their families but also for societies as a whole, because older people can contribute to their families and communities in many ways. Longevity can provide the chance to pursue new activities or long-neglected passions. Yet the extent of these opportunities and contributions depends heavily on one crucial factor: health. Without good health, there is no quality of life with ageing.

Living longer does not necessarily mean living a healthy life. The prevalence of chronic diseases is increasing, posing a significant global public health challenge. Poor health diminishes quality of life and well-being and increases disability levels among older adults, particularly those who are economically disadvantaged. Data from the 2011 census indicate that 40% of older adults in South Africa are poor, highlighting the necessity for healthcare providers to reassess their approach to elder care.

Healthcare practitioners can expect to see an increasing number of older patients in the coming years. This article aims to provide a well-rounded perspective on how to care for older patients, including a review of the ageing statistics, the multiple common health conditions among older people and numerous considerations that healthcare practitioners can apply when caring for this special population.

2. Ageing

Physical and social environments, including homes, neighbourhoods, and communities, and personal characteristics such as gender, ethnicity, and socioeconomic status, influence the ageing process. Most definitions of ageing refer to a progressive decline with age. The decline, however, is not always linear or consistent and is only loosely associated with a person's age in years.² At the biological level, ageing results from the impact of the accumulation of a wide variety of molecular and cellular damage over time. This leads to a gradual decrease in physical and mental capacity and a growing risk of disease.

Nine cellular and molecular hallmark factors have been identified with ageing:

1. the accumulation of DNA damage
2. telomere shortening
3. epigenetic alterations
4. loss of proteostasis
5. deregulation of nutrient sensing
6. mitochondrial dysfunction (responsible for oxidative stress)
7. cellular senescence
8. stem cell depletion
9. impaired intercellular communication.

These damaging events are associated with a chronic, low-grade inflammatory state referred to as “*inflamm-aging*”. In unhealthy ageing, the body fails to compensate for this inflammatory burden effectively.

This overall imbalance towards persistent chronic inflammation results in insufficient tissue repair and tissue degeneration. The resulting phenotypic changes are characterised by:

- increased susceptibility to age-related diseases
- a high risk of concomitant age-related chronic diseases
- decreased stress tolerance
- the emergence of geriatric syndromes
- a worse response to treatment
- and low functional capacity

In contrast, *healthy ageing* is linked to a lower frequency of inflammatory responses and more effective anti-inflammatory strategies.

One method to determine the ageing profile of older people is to assess their biological age (ie, to determine whether a person is younger or older than expected, based on observable manifestations of biological ageing processes). To this end, the WHO has developed the concept of intrinsic capacity, defined as the combination of a person’s physical and mental abilities and their interaction with relevant environmental characteristics that define the individual’s functional capacity. It involves the measurement of 5 critical domains for older adults: cognitive, psychological, sensory, locomotor and vitality.

3. What do the numbers say?

The pace of population ageing is much faster than in the past. In 2020, the number of people aged 60

years and older outnumbered children younger than 5 years. By 2030, one in six people in the world will be aged 60 years or older, rising to 2.1 billion by 2050 (nearly double what it was in 2015). The number of persons aged 80 years or older is expected to triple between 2020 and 2050 to reach 426 million.

Population ageing is taking place three times faster in low- to middle-income countries than in developed countries, and by 2050, will be home to 80% of older people. It is expected that Africa’s population of older adults will more than triple, from 46 million in 2015 to 157 million by 2030.

4. The South African situation

In 2022, the number of people over the age of 60 years was estimated to be approximately 5.6 million, accounting for 9.2 % of the overall South African population, and people 80 years or older accounted for 609,000.

The growth rate of the over-60 population in South Africa is 2.7% per annum, nearly twice the rate for the population under 60. The WHO World Report on Ageing and Health presents an even more serious picture of the impact of ageing in the longer term, projecting that the number of older adults in South Africa will increase to 15.4% of the population by 2050.

Over the past 20 years, the number of older people has increased across all provinces, with Gauteng (1.4 million) and KwaZulu-Natal (940 000) having the highest number of the older population in 2022. Life expectancy of women has increased over the past 20 years from 57 to 65 years, whilst life expectancy for men was 60 years. Gauteng and the Western Cape have a higher life expectancy for both males and females.¹⁶ About 53% of older

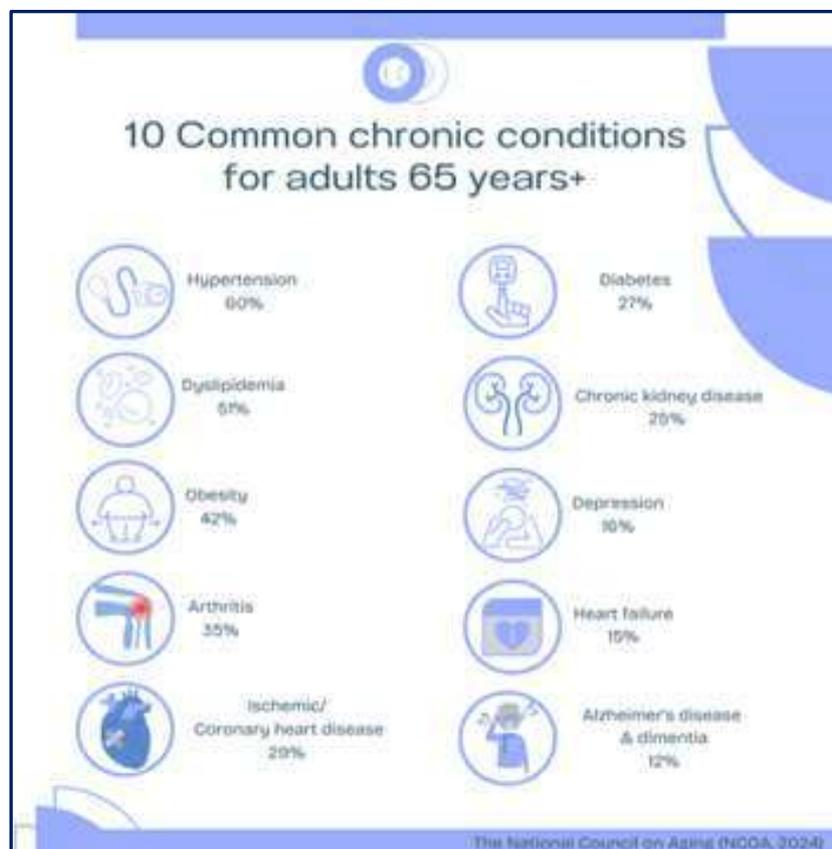
persons over the past 20 years live in extended households, where they would receive at least some psycho-social and economic support.¹⁶

Two patterns are clearly evident: with increasing age, there is an overall increase in the proportion of individuals with chronic conditions and in the number of individuals with co-morbidities, i.e. more than one chronic condition. Older adults are more than twice as likely as under-60s to develop one chronic condition and 7.6 times more likely to develop multiple chronic conditions. In South Africa, the three health conditions that are the most common among older persons are hypertension, diabetes and asthma. Hypertension and asthma are more common among males, while diabetes is more common among females.

5. Common health conditions associated with ageing: What you need to know

Common conditions in older age include hearing loss, cataracts, refractive errors, back and neck pain and osteoarthritis, chronic obstructive pulmonary disease, diabetes, depression and dementia. As people age, they are more likely to experience several conditions at the same time, many of them chronic.

Older age is also characterised by the emergence of several complex health states commonly called geriatric syndromes, which are often the consequence of multiple underlying factors including frailty, urinary incontinence, falls, delirium and pressure ulcers. Common chronic conditions, often present in older people, are discussed below.



5.1 Hypertension

Hypertension is often referred to as the "silent killer" because it can develop over many years without obvious symptoms. Left untreated, it significantly increases the risk of severe health complications, such as stroke, myocardial infarction, and kidney disease.

To prevent or manage hypertension, consider implementing the following steps:

- **Encourage regular physical activity:** The American College of Sports Medicine (ACSM) recommends a multimodal approach to exercise for individuals with hypertension, moving beyond just aerobic exercise. Healthcare practitioners should encourage aerobic, resistance, or a combination of both on most, preferably all, days of the week, aiming for 90-150 minutes per week. Additionally, neuromotor exercises such as functional movements and flexibility training should be done on 2-3 days per week.
 - **Emphasise maintaining a healthy weight:** Even a modest weight loss (e.g. 5 kg) can lead to meaningful reductions in blood pressure.
 - **Promote stress management techniques:** Stress is a known contributor to hypertension. Encouraging patients to engage in stress-reduction practices such as mindfulness, meditation, or relaxation exercises is beneficial to their overall health and well-being. Stretching exercises with focused breathing can also help.
 - **Encourage a reduction in salt and alcohol intake:** Offering clear guidance on reducing sodium and alcohol intake, both key contributors to elevated blood pressure, can help patients become more informed and accountable for managing their health.
- **Implement regular blood pressure monitoring:** Recommend routine blood pressure checks, particularly for those at risk of hypertension. Early identification of pre-hypertension allows for timely intervention and greater success in preventing the progression to full hypertension.

5.2 Dyslipidemia

Lifestyle changes are the foundation for the treatment of dyslipidemia, even for individuals who may eventually require medications to treat their dyslipidemia.

- **Encourage regular physical activity:** The ACSM recommendations are consistent with the recommendations for healthy weight loss and maintenance, which is 250–300 minutes per week of moderate intensity aerobic exercise. Walking is the safest, most easily accessible activity to recommend, but any physical activity that elevates the heart rate can be done. For older adults, it may be a realistic approach to prescribe walking bouts of 10 minutes accumulated throughout the day and the week to reach the recommended dosage. That being said, any exercise or physical activity is better than none, and a good approach is to start low and go slow and build on that.
- **Emphasise smoking cessation and limited alcohol intake:** Both can contribute to elevated cholesterol levels and increase cardiovascular risk.
- **Supporting healthy weight management:** By assisting patients in achieving and maintaining a healthy weight, as excess body fat, particularly abdominal fat, is strongly linked to higher cholesterol levels.
- **Recommend reduced intake of saturated and trans fats:** by encouraging patient education and awareness, starting with simply reading

labels on food packaging and focusing more on whole foods, as saturated and trans fats are commonly found in processed foods, and certain animal products.

5.3 Obesity

Obesity impacts about 42% of adults over the age of 60 and can increase the risk for conditions like heart disease, type 2 diabetes, and some cancers. Recent estimates indicate that approximately 70% of the U.S. population is classified as either overweight or obese (body mass index [BMI] ≥ 25.0 kg/m²), with approximately 40% classified as obese (BMI ≥ 30.0 kg/m²). Obesity has been linked to more than 200 chronic conditions.

The management of body weight is dependent on energy balance, which is determined by energy intake and energy expenditure. For an individual who is overweight or obese, to reduce body weight, energy expenditure must exceed energy intake. Sustained weight loss of 3%–5% is likely to result in clinically meaningful reductions in several CVD risk factors, including triglycerides, blood glucose, and HbA1C levels, and the risk of developing Type 2 diabetes mellitus. There is evidence that as little as 2%–3 % weight loss can result in similar CVD risk factor improvement. Nutritional education, exercise education and prescription are key factors that must go together. These patients are best referred to a biokineticist and dietitian, or nutritionist who can educate and support them.

5.4 Diabetes



Uncontrolled diabetes results in many complications such as kidney disease, cardiovascular disease, or blindness. The key recommendations to prevent diabetes or to manage it in older patients include:

- **Nutritional education and support:** These individuals require the expertise of trained nutritionists or dieticians, and do much better with ongoing support, education and accountability.
- **Physical activity** is a key management tool for any type of diabetes and can assist in preventing multiple diabetes-related health complications, insulin resistance, and T2DM progression. Regular exercise undertaken by individuals with T2DM results in improved glucose tolerance. Other important benefits for individuals with T1DM, T2DM, or prediabetes include improvements in multiple CVD risk factors and overall quality of life. Regular exercise participation may also prevent or delay the transition to T2DM for individuals with prediabetes at high risk for developing the disease. In those with T1DM, exercise may improve insulin sensitivity, thus lowering requirements for exogenous insulin despite having no to little impact on pancreatic function. Safely losing 5-7% of body weight. To help these older patients exercise safely, refer them to a biokineticist who is specially trained.

5.5 Cardiovascular disease (CVD)

After arthritis, CVD is the second most common cause of disability in older people and is a major cause of self-reported poor health. It has been shown that CVD in adults aged 65 years or over was associated with a loss of 6.5 years of “successful” life (i.e life with good health and function) in women and 5.6 years in men.

In the 1990s, most patients with CVD died of cardiac causes. Since then, improvements in care have led to an increase in non-cardiac mortality, irrespective of the severity of CVD. This can be attributed partly to therapeutic advances that have been so significant that the mortality rate in patients with CVD is now much the same as in the general population. But, survivors are more likely to be old, frail, have multiple comorbidities, and polypharmacy; and survival does not necessarily constitute a restoration to the original condition. Functional decline and complex geriatric syndromes are major concerns in the management of older adults with CVD. Functional decline is a prevalent yet preventable complication during hospitalisation, affecting 33% of older patients with acute CVD.

The best treatment is prevention. It is possible to decrease the risk of coronary heart disease and high blood pressure by following the points below:

- Recommend regular physical activity, especially cardiovascular or aerobic exercise. Refer these patients to a biokineticist who can get them started safely and monitor their initial response to exercise. If this is not possible, prescribe daily walking, starting with 10-minute bouts.
- Limiting sugar and salt intake
- Sufficient sleep (7-8 hours of sleep each night)
- Keeping stress levels in check

- Smoking cessation
- Managing risk factors, including high cholesterol and high blood pressure

5.6 Chronic kidney disease (CKD)

People dealing with CKD have an increased risk of developing CVD or progressing to kidney failure. Diabetes and hypertension are the greatest risk factors for kidney damage, so taking steps to prevent these diseases is the best strategy. Early detection via regular screening for kidney function and monitoring key health markers (such as blood pressure and blood glucose) is crucial for early detection. Identifying CKD in its early stages allows for more effective treatment and can significantly slow progression.¹⁸ Timely intervention is important to slow the disease’s progression and manage symptoms of CKD effectively.

5.7 Pain, arthritis, mobility, frailty and falls



Pain and mobility issues, arthritis and falls are other issues the elderly are dealing with. All these conditions can be improved and falls can be avoided by improving strength, balance, coordination and confidence. A biokineticist can help these patients with appropriate exercises that are safe to do, alleviate pain and joint stiffness and improve joint mobility, strength, balance and coordination. With improvements in all these areas, older people will gain confidence in their movements, and not only

reduce the possibility of falls but also dramatically improve the quality of their lives.

5.7.1 Arthritis

Regardless of type, arthritis is generally characterised by pain, impaired physical function, fatigue, and adverse changes in body composition (i.e., muscle loss and increased adiposity), with, for example, 66% of individuals with osteoarthritis (OA) being either overweight or obese at the time of disease onset. Due to the ageing population and rising obesity epidemic, the prevalence of physician-diagnosed arthritis is expected to increase. Regular exercise provides numerous additional benefits to individuals with arthritis, including minimising functional decline or improving functional capacity; reducing the risk of falls; alleviating pain and joint stiffness; reducing comorbidities such as CVD, type 2 diabetes mellitus (T2DM), metabolic syndrome, and osteoporosis; and improving mental health and quality of life. Optimal treatment of arthritis features a multidisciplinary approach, which includes drug treatment, individual education in self-management, occupational therapy, and exercise.

Steps that can be taken to delay the onset of arthritis or manage the symptoms:

- **Exercise:** Although pain and functional limitations can present challenges to individuals with arthritis regarding physical activity, regular exercise is essential for managing these conditions and is a core recommendation of international guidelines. Recommendations include aerobic exercise on 3-5 days of the week as well as strength training 2-3 times per week, along with flexibility training daily to improve function and decrease pain.

- **Maintaining a healthy body weight:** Losing as little as 5 kg can significantly reduce knee pain.
- **Taking precautions to avoid joint injuries:** Refer the patient to a biokineticist who can teach them good exercise techniques, educate them on posture and injury prevention.
- **Smoking cessation.**

5.7.2 Frailty and falls

In 2017, NHS England introduced proactive identification of frailty to the General Practitioners (GPs):

“Frailty is a condition of particular interest that may represent a transitional phase between successful ageing and disability. Frailty is a vulnerable state characterised by the accumulation of impairments in several interdependent systems, a decrease in physiological reserves, and the failure of homeostatic mechanisms in response to low-level stress”.²⁵

In other words, frailty corresponds to a pre-morbid state that reflects “pre-compromised” biological ageing. Women almost always have a higher prevalence and risk of frailty, a more compromised state, whereas they have a lower risk of mortality. Frailty is highly prevalent in older women with CVD (about 1.6 times more than in men).²

Many factors must be considered when caring for frail patients, but two general recommendations are:

1. **Focusing on multidisciplinary care:** Older adults with frailty often require a combination of services, such as biokinetics, occupational therapy, social work, and nutrition counselling. By involving a team of healthcare practitioners, a more holistic, coordinated care plan that

addresses the various dimensions of frailty can improve strength, independence, and mental health.

2. **Promoting physical activity and good nutrition:** Encouraging regular physical activity suited to the individual's abilities, such as balance exercises or strength training, to help improve mobility and reduce the risk of falls. Additionally, proper nutrition is critical for preventing malnutrition and muscle loss. A diet with sufficient calories, rich in protein, vitamins, and minerals, can support muscle strength and overall health, helping to mitigate the impacts of frailty.

The risk of a fall increases with age, immobility and fragility, as does the risk of morbidity and mortality from falls. Adults over the age of 65 years account for the greatest number of fatal falls globally.³³ Falls may be caused by frailty due to inactivity, lack of exercise or movement and loss of strength, but also possibly due to illness, poor health or the effects of medication.

Falls can be caused by almost any drug that acts on the brain or on the circulation. The mechanism that leads to a fall is one or more of the following:

1. Sedation, which causes drowsiness, slows reaction times and impairs balance.
2. Hypotension, including the 3 syndromes of paroxysmal hypotension:
 - Orthostatic hypotension
 - Vasodepressor carotid sinus hypersensitivity
 - Vasovagal syncope
3. Bradycardia, tachycardia or periods of asystole
4. Psychotropic drugs that act on the brain.²³

Taking such medications roughly doubles the risk of falling, and there is evidence that stopping these

drugs can reduce falls. A case control study of approximately 1.3 million people (over the age of 65) found antidepressants were the psychotropic most strongly related to fall injuries, even hospitalisations and death. The number of psychotropics was associated with increased risk of fall injuries, hospitalisation and death in a dose-response manner. Among persons with dementia, a dose-response relationship was found between several psychotropics and mortality risk.

5.8 Multimorbidity

Besides increased frailty, older people have a high prevalence of cognitive disorders and the presence of multiple comorbidities. Multimorbidity refers to the presence of *two or more chronic conditions* (such as CVD, diabetes, hypertension, dyslipidemia, and respiratory disorders) and, together with polypharmacy, is one of the geriatric syndromes. According to the National Council on Ageing (NCOA) research, nearly 95% of adults 60 and older have at least one chronic condition, while nearly 80% have two or more.²¹⁸ The prevalence of multimorbidity in older adults in rural South Africa is high. Chang et al. (2019) found that people aged 60–69 have the highest percentage of conditions with four or more (higher than any other age group except ages 80 and above).

Compared with persons with a single condition, multimorbidity is associated with higher mortality rates, health expenditures and frequency of service utilisation, and lower self-reported health, physical functioning and well-being.

These patients can also have greater illness severity and atypical clinical presentation of illness. This complicates the evaluation and may delay the diagnosis and management of older patients, which increases the risk of adverse outcomes. For

example, the illness trajectory for a patient with heart failure differs from that of cancer patients or patients affected by frailty and/or dementia. Being multi-diseased, older patients can follow all these trajectories at the same time, which may make their symptoms more difficult to assess.(Holmberg, Bennesved & Bremer, 2023: 10)(Samaras et al., 2010). Certain comorbidities (such as chronic kidney disease (CKD) and the associated raised albumin levels that contribute to endothelial dysfunction and vascular damage) increase the chance of a haemorrhagic stroke. This places patients at a greater risk of intracranial bleeding through progressive weakening of blood vessels(Barrett et al., 2023: 8).

Multimorbidity leads to the use of multiple medications, necessitating careful consideration of the potential interplay of these diseases and their associated medication, which may also have repercussions in other parts of the body.

Different diseases affect an individual's ability to function to differing degrees and can induce a state referred to as potential disability⁸. Chronic and comorbid diseases can contribute to reduced quality of life (QoL), more limitations in activities of daily living, functional ability, well-being and lower self-rated health in elderly people.

Below are some of the common conditions affecting older South Africans:

- hypertension (68%; more common among males)
- joint disease (46%)
- heart disease (22%)
- cancer (19%)
- psychological disorders (18.3%)
- diabetes (24% and more common among females)
- asthma (5 %)

In a study by Chang et al. (2019) looking at chronic multimorbidity among older adults in rural South Africa, two definitions of multimorbidity were applied: the presence of more than one condition and the presence of conditions from more than one of the following categories: cardiometabolic conditions, mental disorders, HIV and anaemia.⁴ The study reported that 69% of the respondents had at least two conditions, and 53% had at least two categories of conditions. The most common condition groups and multimorbid profiles were found to be:

- combinations of cardiometabolic conditions
- cardiometabolic conditions and depression
- HIV and anaemia and
- combinations of mental disorders.

Summary findings from the Chang et al. (2019) study:

- The wealthier groups suffered more from cardiometabolic conditions, and the poorer groups had higher proportions of anaemia and HIV
- Females had a significantly higher number of chronic conditions
- Females had a significantly higher prevalence of hypertension, depression and angina, whereas males had a higher prevalence of alcohol dependence
- People living with HIV have a high prevalence of multimorbidity

5.9 Polypharmacy



The practice of drug therapy is by far the most common form of medical intervention for many acute and chronic conditions due to its effectiveness at preventing disease or slowing disease progression.

Because older adults often experience chronic health conditions, the treatment of multiple comorbidities often leads to polypharmacy. Polypharmacy can either be defined in terms of being prescribed more medication than necessary or in terms of the number of medications taken, usually more than five.

The prevalence of polypharmacy is increasing, particularly among older people. Lipsky et al. (2023) state that over half of adults 65 years and older report taking four or more prescription drugs to manage chronic conditions, including those for CVDs and diabetes. The level of polypharmacy is higher among female geriatric patients. Older people who are frail, hospitalised, or in nursing homes take the most drugs.

Most drugs used by older people for chronic disorders are taken for years. Other drugs may be taken for only a short time to treat such problems as infections, some kinds of pain, and constipation. Almost 90% of older adults regularly take at least 1 prescription drug, almost 80% regularly take at least 2 prescription drugs, and 36% take at least 5 different prescription drugs regularly. When over-

the-counter and dietary supplements are included, these rates are even higher.

In a retrospective study of older patients with CVD who were admitted to a cardiology department, the prevalence of polypharmacy (95%, and even 69% for excessive polypharmacy [≥ 10 drugs]) far exceeded that observed in the general population. On average, patients were treated with 11.6 to ± 4.5 drugs at home.

Older people can be more sensitive to certain medications, and polypharmacy increases the risk of drug interactions and adverse reactions and also affects compliance. For the healthcare practitioner, estimating the benefits and harms of a medication in an older person is particularly challenging, as comorbidities, concurrent medications, pharmacokinetics, and pharmacodynamics can all impact the clinical outcome. The interplay between individual chronic disease strategies can compete with each other and create barriers to the provision of coordinated care.

A South African study by Odubanjo, Tipping and Greenstein (2024) that included 130 patients reported that polypharmacy affected 53% of the participants. Despite 96% of participants being adherent, all had at least one barrier to adherence, with the majority (65%) having more than one barrier. A complicated drug regimen and polypharmacy can affect patient compliance. According to the WHO, medication adherence rates in developing countries are likely worse than the 50% adherence rates seen in developed countries.

There is a certain correlation between multimorbidity and *potentially inappropriate medications (PIMs)*, and the prevention of chronic diseases. This is of great significance for improving drug safety in older populations.

Appropriate pharmacy occurs when multiple medications are used in such a way that each one has a clear indication with minimum risk of harm. The hallmark of appropriate pharmacy is rational prescribing, whereas polypharmacy can be harmful when not properly managed.²⁰

Inappropriate polypharmacy is present when one or more drugs are prescribed that are not needed or are no longer needed, either because:

- No evidence-based indication, the indication has expired, or the dose is unnecessarily high
- One or more medicines fail to achieve the therapeutic objectives they are intended to achieve
- One or a combination of several drugs causes unacceptable adverse drug reactions (ADRs), or puts the patient at an unacceptably high risk of such ADRs
- The patient is not willing or able to take one or more medicines as intended

A study by Tian et al. (2023) looked at potentially inappropriate medications (PIMs). A total of 94 articles with 132 prevalence estimates were analysed, including nearly 371 million older participants from 17 countries. The findings were as follows:

- Overall, the pooled prevalence of PIM use was 36%
- Africa had the highest prevalence of PIM use (47%)
- South America (46%)
- Asia (37%)
- Europe (35%)
- North America (29%), and
- Oceania (23%).

During the past decade, the global prevalence of PIM use among older outpatients has exceeded 40%.³⁰ The prevalence of PIM use is highest in low-income areas, and among older patients has become increasingly prevalent in the past two decades. PIM is closely related to an increase in the incidence of adverse drug reactions (ADRs) and emergency department visits. Meanwhile, compared with patients without PIM use, their health-related quality of life is worse.³⁰

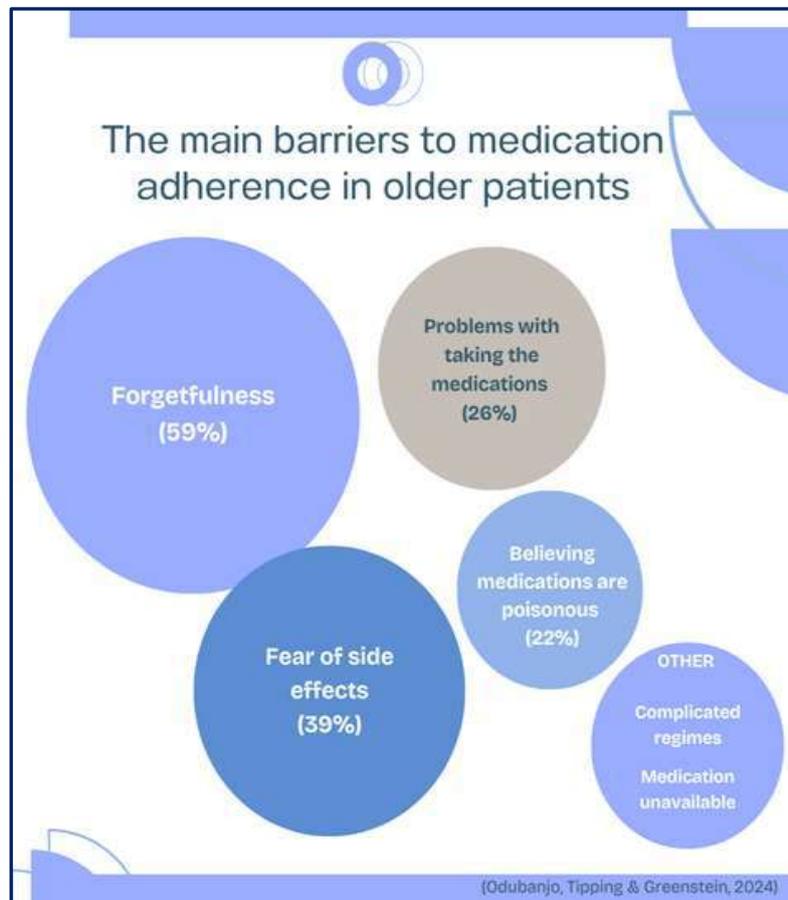
Patients older than 80 years and polypharmacy patients were more likely to receive PIMs because they have worse health and more multimorbidity than the general population of older adults, and they are more likely to be exposed to PIM use.

Benzodiazepines were the most common PIMs. The high prescription rate of benzodiazepines could be attributed to the high prevalence of insomnia in the geriatric population. Because of the gradual ageing of the functions of various organs and tissues, the geriatric population is more sensitive to drugs, and although benzodiazepines are thought to be associated with an increased risk of cognitive impairment, falls, and fractures, they are still common in the geriatric population. Almost all criteria list this type of medication as potentially inappropriate.

In a 6-year prospective study including nearly 600 patients 70 years of age or older, Doherty et al. (2023) reported the following:

- 48% of participants experienced polypharmacy (5–9 drug classes).
- 9% experienced major polypharmacy (≥10 drug classes).
- A total of 211 ADRs were recorded in 159 participants, indicating a cumulative incidence of 26% over the 6-year period.

- 10 ADRs (4%) resulted in additional healthcare utilisation (outpatient appointment or hospitalisation).
- Cardiovascular, nervous system, and anti-infective drugs were most commonly implicated in ADRs.
- 24% of participants experienced at least one ADR.



Bojuwoye, Suleman & Perumal-Pillay (2022) did a cross-sectional retrospective prescription chart review for 250 geriatric patients in South Africa. Their findings are as follows:

- The average number of diagnosed clinical problems was three.
- Hypertension, diabetes mellitus, and heart disease occurred most frequently.
- The level of polypharmacy was high, with patients receiving an average of 12±4 prescribed medicines from 3032 prescribed medications.
- The level of polypharmacy was highest within the age categories, 60–64, and 70–74 years of age, respectively.
- The level of potential drug–drug interactions was also high, with an average of 10±7 from 2570 potential drug interactions.
- The majority of these interactions were moderate (72%) and pharmacodynamic (73%) by nature of the clinical severity of action and mechanism of action, respectively.
- Polypharmacy was determined to be the strongest contributor to the occurrence of potential drug–drug interactions.

- Irrespective of the type of prescriber contact, polypharmacy increases the potential for drug interactions among older patients.

Drug classes most commonly implicated in ADRs

Drug Class	Examples
Cardiovascular system drugs	<ul style="list-style-type: none"> • Amlodipine • Furosemide
Nervous system drugs	<ul style="list-style-type: none"> • Citalopram • Mirtazapine • Tramadol
Anti-infectives for systemic use	<ul style="list-style-type: none"> • Amoxicillin • Co-amoxiclav

(Doherty et al, 2023)

Physical & cognitive impairments can effect an individuals ability to take medication



3 Considerations

- 1** Are there alternatives to packaging?
- 2** Can it be swallowed easily, does the patient need fluid to wash it down, can it be crushed or given in liquid form?
- 3** Different containers aid dispensing & compliance with medication e.g. dosage boxes, blister packs, & easy screw topped bottles

Physiopeedia

Recommendations

Thus, a rational review of prescribed medications in this patient population is crucial towards identifying factors that contribute to polypharmacy, as well as a means to reduce adverse medicine-related events, which negatively impact healthy ageing.

Strategies that can improve medicine use and limit the occurrence of significant drug interactions among the older patient population include:

- rational medicine review
- *deprescribing* (i.e. a systematic review of prescribed medications either for reduction or discontinuation),
- incorporation of pharmacist recommendations
- patient education on rational medicine use
- a comprehensive consideration of disease management guidelines
- use of peer-reviewed evidence-based guidelines (e.g., Screening Tool to Alert Doctors to Right Treatment (START), Screening Tool of Older People's Potential Inappropriate Prescriptions (STOPP) and Beers criteria).

Adverse drug reactions (ADRs) in older people

Older people are more sensitive to the effects of many drugs. For example, they tend to become sleepier and are more likely to become confused when using certain anti-anxiety drugs or sleep aids to treat insomnia. Some drugs that lower blood pressure tend to lower blood pressure much more dramatically in older people than in younger people. Larger decreases in blood pressure can lead to side effects such as dizziness, light-headedness, and falls.

The WHO defines an ADR as any noxious, unintended, and undesired effect of a drug,

excluding therapeutic failures, intentional and accidental poisoning, and drug abuse.

ADRs are common among older adults in general practice. Approximately one in four people experienced at least one ADR over a 6-year period, with females and those with major polypharmacy at highest risk. ADRs are independently associated with female sex, polypharmacy (5–9 drug classes), and major polypharmacy (≥ 10 drug classes), while the likelihood of ADR increased more than threefold for those with major polypharmacy.

Older people are especially vulnerable to ADRs, and are more than twice as susceptible to the side effects of drugs and related adverse outcomes such as emergency admission, drug-related morbidity, and mortality. Side effects are also likely to be more severe, affecting quality of life and resulting in doctor's visits and hospitalisation.²⁴ While the majority of ADRs are mild (89%), approximately one-third (34%) of moderate ADRs result in an emergency admission, and the cause of nearly 10% of hospitalisations of older adults.

Older people are more susceptible to the side effects of drugs for several reasons:

- As people age, the total amount of water in the body decreases, and the amount of fat tissue increases. Drugs that dissolve in water reach higher concentrations because there is less water in the body to dilute them, and drugs that dissolve in fat accumulate more since there is relatively more fat tissue to store them.
- As people age, the kidneys are less able to excrete drugs into urine, and the liver is less able to metabolise many drugs, so drugs are less readily removed from the body.
- Older people usually take more drugs and have more disorders.

- People who take more drugs have a higher risk of drug interactions.
- Older people are more likely to have chronic medical disorders. This may be worsened by drugs as well as may affect how the drugs work.

Because of these age-related changes, many drugs tend to stay in an older person's body much longer, prolonging the drug's effect and increasing the risk of side effects. Therefore, older people often need to take smaller doses of certain medications or perhaps fewer daily doses.

A drug may have a side effect because it interacts with:

- A disorder, symptom, or condition other than the one for which the drug is being taken (drug-disease interaction)
- Another drug (drug-drug interaction)
- Food (drug-food interaction)

- A medicinal herb (drug-medicinal herb interaction)

Because older people tend to have more diseases and take more drugs than younger people, they are more likely to have drug-disease and drug-drug interactions. In many drug-disease interactions, taking a drug can worsen a disorder, symptom, or condition.

In addition to prescribed medication, older people may also take many non-prescription (over-the-counter, or OTC) drugs, many of which are potentially hazardous. The American Geriatrics Society (AGS) Health in Ageing Foundation recommends that older people be cautious about using the following types of medications, including some that can be purchased without a prescription (over-the-counter).



Ten medications older people should avoid or use with caution

Medication	Recommendation	Notes	Reasons
<p>Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)</p> <p>Used to reduce pain and inflammation</p>	<p>USE WITH CAUTION</p> <p>AVOID regular, long-term use of NSAIDs</p>	<ul style="list-style-type: none"> When good alternatives are not available & NSAIDs are necessary, use a proton pump inhibitor such as omeprazole (Prilosec) or misoprostol (Cytotec) to reduce bleeding risk. Use special caution if: <ul style="list-style-type: none"> at higher risk of developing bleeding stomach ulcers people over 75 years old, people taking oral steroids people taking a blood-thinning medication such as apixaban (Eliquis), aspirin, clopidogrel (Plavix), dabigatran (Pradaxa), edoxaban (Savaysa), rivaroxaban (Xarelto), or warfarin (Coumadin) people with kidney problems or heart failure 	<p>NSAIDs can increase the risk of bleeding stomach ulcers. They can also increase blood pressure, affect kidneys & make heart failure worse.</p>
<p>Aspirin</p> <p>Used to prevent heart attacks & strokes</p>	<p>USE WITH CAUTION</p>	<ul style="list-style-type: none"> If the person has NEVER had heart problems or a stroke, the harms of aspirin can outweigh its benefits. If the person has heart problems or stroke, aspirin is usually recommended to prevent future heart problems or strokes. 	<p>Aspirin can increase the risk of stomach bleeding.</p>
<p>Digoxin (Lanoxin)</p> <p>Used to treat heart failure and irregular heartbeats.</p>	<p>USE WITH CAUTION</p>	<ul style="list-style-type: none"> For most older adults, other medications are safer & more effective. Avoid doses higher than 0.125 mg per day. Higher doses increase toxicity & provide little additional benefit. Be particularly careful if there are moderate or severe kidney problems. 	<p>It can be toxic in older adults and people whose kidneys do not work well.</p>
<p>Certain Diabetes Drugs</p>	<p>USE WITH CAUTION</p>	<p>Glyburide (Glynase), glipizide (Glucotrol), glimepiride (Amaryl), glizalide.</p>	<p>These can cause dangerously low blood sugar.</p>
<p>Muscle Relaxants</p>	<p>AVOID</p>	<p>Such as cyclobenzaprine (Flexeril), methocarbamol (Robaxin), carisoprodol (Soma), & similar medications.</p>	<p>They can cause grogginess & confusion, increase risk of falls, cause constipation, dry mouth, & problems urinating. There is little evidence that they work well.</p>
<p>Certain Medications used for Anxiety &/or Insomnia</p>	<p>AVOID</p>	<p>Benzodiazepines, such as diazepam (Valium), alprazolam (Xanax), & chlordiazepoxide (Librium).</p> <p>Sleeping pills such as zaleplon (Sonata), zolpidem (Ambien), & eszopiclone (Lunesta)</p>	<p>They can increase risk of falls, cause confusion. Because it takes the body a long time to get rid of these drugs, these effects can carry into the day after administration.</p>
<p>Certain Anticholinergic Drugs</p>	<p>AVOID</p>	<ul style="list-style-type: none"> Antidepressants amitriptyline (Elavil) & imipramine (Tofranil). Anti-Parkinson drug trihexyphenidyl (Artane). Irritable bowel syndrome drug dicyclomine (Bentyl). 	<p>They can cause confusion, constipation, dry mouth, blurry vision, and problems urinating (in men).</p>
<p>Certain Over-the-Counter (OTC) Products</p>	<p>AVOID</p>	<ul style="list-style-type: none"> AVOID products that contain the antihistamines diphenhydramine (Benadryl) & chlorpheniramine (AllerChlor, Chlor-Trimeton). These medications are often included in OTC remedies for coughs, colds, & allergies. AVOID OTC sleep products, like Tylenol PM, which contain antihistamines such as diphenhydramine. 	<p>Although these medications are sold without a prescription, they are not risk-free. They can cause confusion, blurred vision, constipation, problems urinating, & dry mouth.</p>
<p>Estrogen Pills & Patches</p>	<p>AVOID</p>	<p>Typically prescribed for hot flashes & other menopause-related symptoms.</p>	<p>They can increase the risk of breast cancer & blood clots.</p>
<p>If NOT being treated for psychosis</p>	<p>USE WITH CAUTION</p>	<p>Use antipsychotics such as haloperidol (Haldol), risperidone (Risperdal), or quetiapine (Seroquel) WITH CAUTION. These medications are commonly used to treat behavioural problems in older adults with dementia.</p>	<p>They can increase the risk of stroke or even death in older adults with dementia. They can also cause tremors & other side effects, as well as increase the risk of falls.</p>

(Aldoud et al. 2023)

Some disorders & symptoms that can be worsened by drugs in older people

Disorder or Symptom	Drugs
Chronic kidney disease	NSAIDs (such as ibuprofen and naproxen)
Delirium, dementia, or mild cognitive impairment	<ul style="list-style-type: none"> • Antipsychotic drugs • Corticosteroids • Drugs with sedative effects (such as benzodiazepines, sedatives, and sleep aids, including eszopiclone, zaleplon, and zolpidem) or anticholinergic effects* • Histamine-2 blockers (cimetidine, famotidine, nizatidine, ranitidine) • Meperidine
Fainting or orthostatic hypotension (sudden decrease in blood pressure when a person stands up)	<ul style="list-style-type: none"> • Acetylcholinesterase inhibitors (for example, donepezil, galantamine, rivastigmine) • Peripheral alpha-1 blockers (used to treat hypertension or prostate symptoms in older men, such as doxazosin, prazosin, terazosin) • Some tricyclic antidepressants (for example, amitriptyline, doxepin, imipramine) • Antipsychotics (such as chlorpromazine, thioridazine, olanzapine) • Beta-blockers (for example, metoprolol, atenolol, carvedilol)
Falls	Drugs with sedative effects (such as antiseizure drugs, antipsychotics, benzodiazepines, eszopiclone, zaleplon, and zolpidem), antidepressants, and opioids
Heart failure	<ul style="list-style-type: none"> • Cilostazol • Some (nondihydropyridine) calcium channel blockers (diltiazem, verapamil), usually used to treat hypertension • NSAIDs, COX-2 inhibitors, thiazolidinediones (pioglitazone, rosiglitazone), dronedarone
Parkinson disease	Certain anti-nausea drugs (metoclopramide, prochlorperazine, promethazine) and most antipsychotics except a few such as quetiapine, clozapine, and pimavanserin
Peptic ulcer disease or stomach bleeding	Aspirin and most NSAIDs
Urinary incontinence in women	Doxazosin, estrogens taken by mouth or through the skin (not applied directly to the vagina), prazosin, terazosin
Urinary retention or urinary symptoms caused by an enlarged prostate (such as slow urinary flow, frequent urination of smaller amounts, and dribbling)	Drugs with anticholinergic effects*, cold remedies containing decongestants, or a combination of antihistamines and decongestants

*Anticholinergic effects include confusion, blurred vision, constipation, dry mouth, light-headedness and loss of balance, and difficulty starting to urinate.

[Ruscín & Linnebur, 2023]

Potential candidates for medication review

ADRs can be difficult to identify in medically complex older adults as they often present as nonspecific symptoms. Healthcare practitioners should detect the occurrence of ADRs from drugs prescribed in primary care as well as in other care settings. *Deprescribing* of ineffective medications and those no longer clinically indicated is one approach to reducing the risk of ADRs in older patients.

The following are potential candidates for a medication review:

- All patients in care homes aged 50+, regardless of the number of medicines that they are on
- Patients who are:
 - Aged 75 and over (consider those aged 65 and above)
 - On 10 or more medicines, one of which is a high-risk medication
- When a patient has the following:
 - Multiple conditions
 - Frailty
 - Dominant condition such as dementia
 - End of life care.²³

People should be routinely encouraged to actively participate in their own care. It is essential to take steps to support people to manage their medicines by involving family members or carers. A good patient-doctor relationship improves adherence. Adherence is better when patients know what their medication is for and they trust their healthcare provider.

5.10 Cognitive impairment, Alzheimer's disease and dementia

About 16% of the US population 65 years or older has mild cognitive impairment (MCI). Among them, 14% will develop dementia within 2 years.¹⁷ Impaired mental status occurs in approximately one quarter of all older patients presenting to the emergency department as a result of delirium, dementia, or both. Delirium is, by definition, a result of an underlying condition, is potentially severe, and is important to recognise quickly. It occurs in 7% to 10% of this population and is associated with increased mortality.

Alzheimer's disease is one specific type of dementia—a condition that causes memory loss and difficulty thinking or problem-solving to the point that it interferes with everyday activities. Dementia is not a normal part of ageing and is caused by changes in the brain over time. The rate of undetected dementia in the United States is 60%.

Patients can have multiple symptoms and conditions that overshadow cognitive concerns, especially with subtle signs of memory decline. Primary care clinicians may also be reluctant to test for, discuss, or diagnose cognitive impairment with their patients because they cannot confidently interpret the test results or provide appropriate diagnostic follow-up. Mild cognitive impairment remains substantially underdiagnosed, especially in disadvantaged populations. Failure to diagnose it deprives patients and families of the opportunity to treat reversible causes, make necessary life and lifestyle changes and receive disease-modifying treatments if caused by Alzheimer's disease. Primary care, as the entry point for most, plays a critical role in improving detection rates by recognising signs and symptoms suggestive of early-stage cognitive decline either in response to a subjective memory complaint or as part of a geriatric wellness visit, and then referring the

patient for further evaluation, ideally after conducting routine tests for reversible causes. Early detection of cognitive impairment and dementia via cognitive screenings (see the diagram “Examples of validated brief cognitive assessments”) has the potential to improve quality of life for patients and their family members, as they can better prepare themselves and reduce depressive and anxiety symptoms. It can also be informative of other medical conditions, therefore creating more holistic care and supporting patients’ overall health and quality of life. The emergence of disease-modifying treatments for Alzheimer’s disease lends new urgency to the need for early detection because those treatments are only indicated for mild cognitive impairment and mild dementia due to Alzheimer’s disease. Despite these potential benefits, only about half of older adults

are actually being assessed for cognitive issues. For these reasons, incorporating validated brief cognitive assessments into the regular workflow is recommended.

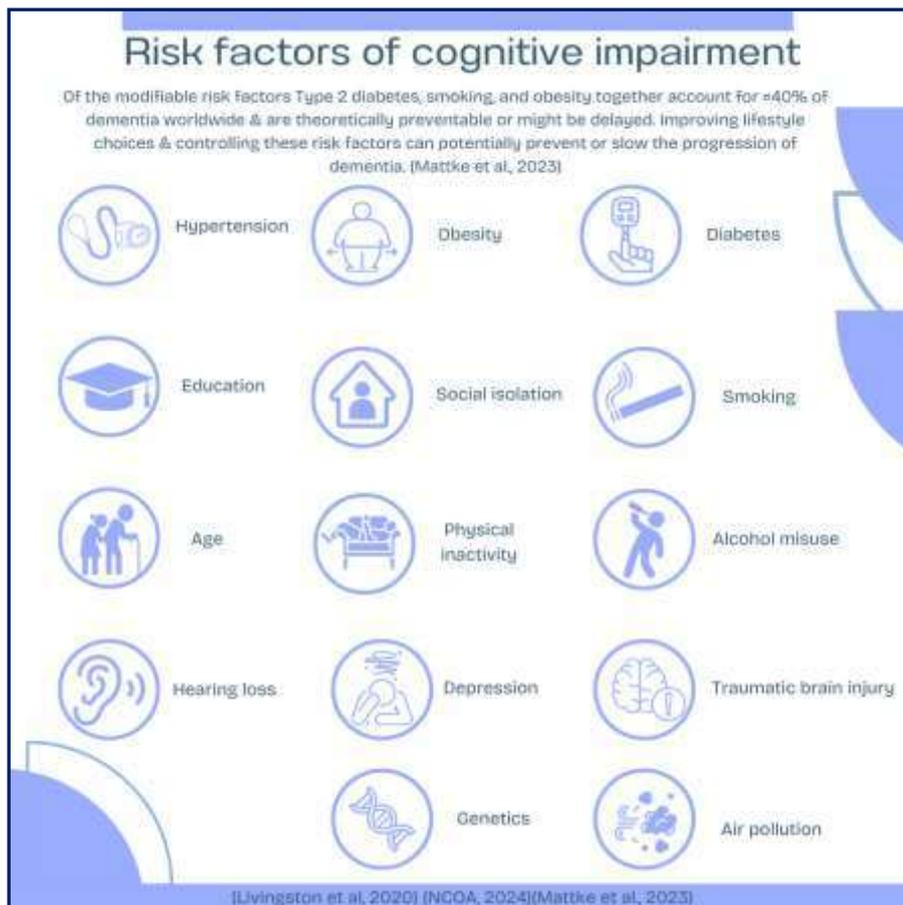
Incorporating the following lifestyle habits could slow or prevent the onset of cognitive impairment:

- regular physical activity and exercise (staying active is good for the heart, and also good for the brain),
- sufficient quality sleep (getting at least 7 hours of deep sleep a night is crucial),
- good nutrition,
- managing Type 2 diabetes,
- smoking cessation,
- weight loss.

Examples of validated brief cognitive assessments

Type of tool	Examples
Test administered to patient	<ul style="list-style-type: none"> • Blessed Orientation Memory Concentration (BOMC) • Brief Cognitive Assessment Tool (BCAT) • Brief Interview for Mental Status (BIMS) • Cambridge Neuropsychological Test Automated Battery (CANTAB) - Cogstate Brief Battery (Cognigram) • General Practitioner Assessment of Cognition (GPCOG) - MCI Screen • Memory Impairment Screen (MIS) • Mini-Cog • Mini-Kingston Cognitive Assessment Revised (Mini-KSCAR) - Mini-Mental State Examination (MMSE) • Montreal Cognitive Assessment (MoCA) • Quick MCI Screen (QMCI) • Rapid Cognitive Screen (RCS) • St. Louis University Mental Status (SLUMS) • Tablet-based Cognitive Assessment Tool Brain Health Assessment (TabCAT-BHA)
Tests administered to informant	<ul style="list-style-type: none"> • Eight-item Informant Interview to Differentiate Aging and Dementia (AD8) - Family Questionnaire • General Practitioner Assessment of Cognition (GPCOG) • Informant Interview • Quick Dementia Rating System (QDRS) • Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)

Note: Examples are not inclusive or intended to be recommended (Mattke et al, 2023: 4256)



5.11 Depression

Depression is a treatable medical condition that is not a normal part of ageing. Depression causes persistent feelings of sadness, pessimism, hopelessness, fatigue, difficulty making decisions, changes in appetite, a loss of interest in activities, and more.

Many older adults report not knowing where to get help or feeling like they should be able to solve their problems themselves. Depressed older adults (≥ 65 years) often do not receive adequate psychological care and have a 2 to 3 times lower chance of being referred for a guideline-focused psychological treatment.

Even though the majority of older adults with depression would rather receive psychological than pharmacological treatment, most patients are

treated with antidepressants. Antidepressants often take several weeks to show effect, and their use is associated with risks and adverse events, such as falls and possible adverse interactions.

Within behavioural activation, the therapist and patient work together to create a personal environment of positive reinforcement by increasing functional and pleasurable behaviour and decreasing avoidant and depressed behaviour. Behavioural activation uses behavioural techniques, leaving out the more complicated cognitive techniques, and thus can be delivered by less specialised health practitioners such as mental health nurses. A study by Janssen et al. (2023) compared behavioural activation versus treatment as usual for depressed older adults in primary care and reported that behavioural activation led to a greater reduction and severity of depressive symptoms in older adults, compared to treatment

as usual in primary care, starting in the second week of the study and up to 3 months after the end of treatment but not at the 6–12 month follow-up⁹, indicating the need for ongoing care.

Older people tend to visit their GP frequently, making the primary care setting a practical option for increasing accessibility of mental health care.⁹ Steps that can be taken to help those with depression include:

- managing stress levels
- good nutrition (high nutrient density and limiting consumption of alcohol, caffeine, artificial sweeteners, and highly processed foods)
- regular physical activity and exercise (which improves mood, boosts self-confidence and self-worth through meeting goals and improving strength and functionality, increasing independence, and opportunity to socialise)

5.12 Geriatric Syndromes (GS)

Older age is also characterised by several complex health states, commonly called geriatric syndromes. The GS concept requires a shift from the conventional medical use of the term “syndrome” (i.e a set of symptoms with a single underlying cause). GS result from the cumulative, synergistic effects of discrete diseases on multiple organ systems; when the body can no longer compensate, the effects are finally expressed as a single symptom. Just as heart failure is an expression of the heart’s limited ability to tolerate additional stress, GS is the failure of postural status for falls or failure of brain function for delirium. GSs commonly include gait disorders, falls, cognitive decline, delirium, depression, urinary incontinence, pressure ulcers, malnutrition, sarcopenia, sensory

impairments, chronic pain, sleep disorders, urinary incontinence, and frailty.

Older people with CVD are particularly likely to develop geriatric conditions, which are powerful but often overlooked non-cardiovascular prognostic factors that are responsible for a range of adverse events.² A survey of adults aged 65 years or older, 25% of those with congestive heart failure or CVD had severe urinary incontinence or at least one fall. The prevalence of GS is linearly related to the number of comorbidities, particularly in older adults with CVD. Patients with ischemic heart disease and heart failure have an average of two GSs (particularly pain, urinary incontinence, and falls). Older adults with CVD and two or more other diseases were twice as likely to develop GS as those with CVD alone. Conversely, clinical data have also suggested that the presence of GS increases the CVD risk. Despite the contributory role of GSs in older people with CVD, these syndromes are still under-recognised and often overlooked.

Geriatric conditions negatively affect the presentation and course of CVD, so that diagnosis, prognosis, and management are worsened by the presence of these conditions.

5.13 Other common chronic conditions for older adults

Ageing decreases the body’s ability to compensate for stressors such as dehydration, infection, or trauma. Other aspects to consider include :

- heightened anxiety
- hearing loss
- cataracts and other eye problems
- back and neck pain and
- infections such as urinary tract-related infections.



6. What do older people value when they visit their healthcare practitioner?

Older patients see their healthcare practitioners often and have different expectations and value different things than their younger counterparts.

“In considering the needs of older people, it is well, first, to remember that older people have the needs that are common to all people, and, second, that they have special needs due to the fact that they are old people”

6.1 A welcoming and supportive environment

A few simple things can go a long way in helping older patients feel welcome and supported in the practice. In terms of the physical surroundings:

1. ease of access for wheelchairs, walkers and caregivers to assist these patients
2. providing comfortable chairs with good back support and cushions if needed. Chairs should not be too low and

should also have armrests that the patient may need to use

3. being mindful of the temperature (not too cold)
4. warm lighting in the reception area is calming, but must also be good enough for the patients to read and fill in paperwork.

Older people value both clinical proficiency and interpersonal effectiveness or patient rapport, however, they pay more attention to the latter and perceive it more positively. Being friendly, kind, considerate and light hearted can help patients be more relaxed during consultations. They value the human connection as many may be quite lonely. Being asked about other family members or having a short chat establishes a mutual connection. Patients have often reported these positive behaviours as being the most important to them. Patients have said that they “felt healthier” just by consulting with their healthcare provider and that the visit itself was therapeutic.

Statements of some participants clearly showed how they valued the healing power of consultation with the doctor:

*“When the GP would look at you kindly, talk to you, cheer you up and even say—please, do not worry, it will be all right ”
(Woman, aged 71).*

*“He would advise on illness in such a way that you would leave satisfied. Maybe this disease is growing, but if you talk to him, you are leaving healthier (...). They cure even with words ”
(Man, aged 75).*

This group of patients particularly values empathy and compassion. Some things that can be done to show more care include:

- engaging the person
- listening carefully to what they are trying to say
- being interested in their well-being
- being compassionate and non-judgmental
- taking their special needs into consideration
- considering their preferences and being accommodating wherever possible
- showing respect by speaking quietly, calmly, and reassuringly
- including them in the situation respectfully and supporting them in making care decisions (despite their possibly struggling to make decisions)
- helping them with other things

6.2 Partnership building and patient involvement

Establishing a trustworthy and respectful relationship with older people and their families ensures that older people receive the education and support they need.¹¹ People over 70 want to play an active role in their healthcare. These patients value being treated as intelligent beings who are capable of making their own decisions, and are more willing to cooperate if healthcare

practitioners respect their autonomy. They seek to be involved in treatment decisions, either by sharing the responsibility with their healthcare practitioner or by being the primary decision maker. Given that many are dependent on others to varying extents, a primary concern is the collaboration in health decisions and continuity of care through contact with the same healthcare practitioner.

6.3 Communication

Effective communication (verbal and non-verbal) is a cornerstone of quality healthcare and is critical for all health professionals. It is associated with enhanced patient satisfaction and increases compliance, leading to improved health and better outcomes.

Older patients really value their time with their healthcare practitioner, valuing opportunities to express their opinions and feelings. Taking the time to listen attentively to their concerns allows them to feel heard and understood. They appreciate thorough interviews about their complaints, as they worry about overlooking important details. Direct questions like 'How do you feel?' 'What happened?' and 'Does it hurt?' are essential for encouraging open communication. Clear, explanations of procedures (avoiding jargon) help them feel more comfortable and informed.

Healthcare provider-patient communication plays several roles, including:

- helps providers bond with patients, improving the relationship
- it establishes trust between providers and patients
- creates a therapeutic relationship

- exchanging information and engaging the patient in treatment decisions
- managing the patient’s doubts
- addressing emotions
- helps patients to acknowledge their illnesses, the associated risks, and the advantages of consistent treatment
- enhances self-management
- listening, developing a good interpersonal relationship, and making patient-centred management plans
- involving patients in decisions
- allowing patients to speak without interruptions
- encouraging a patient to ask questions and answering the questions
- using a language that the patient understands
- paying attention to the patient and discussing the next steps

Features of effective or quality communication include:

Various verbal & non-verbal communication strategies positively impacted all patient-centred outcomes

Nonverbal communication	Verbal communication	Communication Strategies	Patient-centred Outcomes
Comfort touch	Positive talk	Tailored intervention	Wellbeing
Active listening	Lifestyle discussion	Telephone communication	Self-esteem
Smiling	Rapport building	Participatory approach	Health status
Gaze	Mutual respect	Curated story	Social processes
Eyebrow movement	Equity		Life satisfaction
Head nod	Conflict resolution		Self actualisation
Handshakes			Self responsibility
Nurse-side-initiated communication			Patient satisfaction
Emotional support			Increased awareness of COPD effects
Effective nonverbal communication			Improved health literacy
			Presenting problems
			Mental & physical health
			Adherence to healthcare practitioners recommendations
			Improved quality of care
			Shorter hospital stays

(Barris, 2011)

In addition to emotional support, a range of nonverbal communication strategies can be used

including comfort touch (a handshake or a pat on the shoulders, forearm, or hand), smiling, laughter,

eye contact, touch, eyebrow movements, nodding, maintaining proximity, active listening, leaning forward, and speaking in a gentle tone. These techniques are effective for engaging with patients, initiating personal conversations, and ensuring ongoing communication. They also have a positive impact on various patient-centred outcomes, such as well-being, self-esteem, health status and self-responsibility.

Older patients may have hearing or eyesight difficulties, sometimes requiring adaptations to how information is relayed. Older patients value receiving information, explanations and advice from their healthcare practitioner. Clear written instructions and visual aids are helpful, as well as photo and video-based information.

Regular telephone communication can improve the patient's perceptions of the quality of care and help patients to be accountable, e.g. in quitting smoking, increasing awareness of health behaviours, and maintaining regular physical activity.

6.4 Respect

Older people with poor health and who depend on other people are often treated with less respect. Effective verbal communication in healthcare relies on clarity, mutual respect, equity, and constructive conflict resolution. Patients perceive greater

personal care from nursing aides when interactions are founded on mutual respect.

Demonstrating mutual respect includes addressing patients by name, actively listening, acknowledging concerns or anxieties, and offering reassurance. Attending to older patients' experiences, preferences, and needs can alleviate suffering both immediately and in the long term.

6.5 Enough time

Having enough time for the consultation is highly valued among older adults. Remember that these patients are moving at a different pace than those who are younger; communication may be slower and sometimes more challenging. They often have multiple concerns to discuss during a single visit, making extended consultations particularly beneficial. Feeling rushed can lead to anxiety, decreased patient satisfaction, reduced compliance and a perception of receiving inadequate care.

“She has time for the patient always, she would talk, she would ask, she is not in a hurry, because someone else is waiting. And at this age, it is known, we want to talk to someone.”

(Woman, aged 66)



7. Person/patient-centred care recommendations

Person-centred care (PCC), as defined by the WHO, implies holistic treatment of individuals, addressing their multifaceted needs and goals in caregiving. This approach is essential for enhancing care quality and has been shown to positively impact health outcomes. It emphasises proactive and compassionate care at the core of caregiving for older adults, encouraging every member of the care team to prioritise building trust and rapport.

The following steps can improve patient-centred care:

- explaining the procedure, its purpose, and potential outcomes in clear and understandable terms
- ensuring comprehension of procedures, risks, and follow-up instructions
- using simple language, repeat and confirm
- involving older patients in decision-making and teamwork whenever possible
- treating older patients with respect and dignity while maintaining their autonomy and equality
- treating patients as a whole
- personalised care and tailored care plans to meet the needs and preferences of the individual
- taking into account older people's values and preferences and combining them with the expertise and knowledge of the care team
- listening to and addressing the older person's concerns
- education and support for caregivers (especially when caring for those with dementia)
- regular follow-up phone calls (to assist in compliance, accountability, self-management)

and patient education; including explaining to them exactly what their chronic conditions are, how the medications work and what side effects to expect).

8. A multidisciplinary teamwork approach and collaborative care

A multidisciplinary approach involves collaboration among healthcare professionals (e.g., doctors, nurses, physiotherapists, biokineticists, dieticians, psychologists, social workers) to address all aspects of an older patient's health, including physical, mental, emotional, and social well-being. This comprehensive care is particularly crucial for optimising diagnostic and therapeutic strategies in older patients.

Research on depression in older adults has shown that collaborative care leads to more effective short-term outcomes compared to standard treatments. This approach typically involves assigning a case manager to coordinate care, monitor the patient's condition, adjust medications, and connect the patient with additional services, e.g. biokinetics, physiotherapy, counselling, etc.

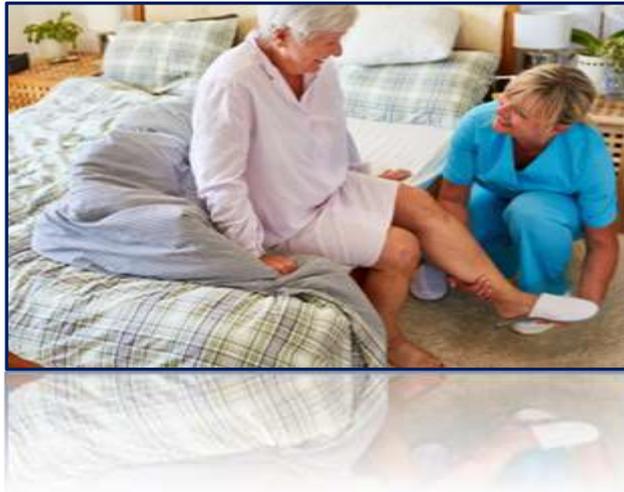
A team-based, coordinated approach enables the creation of individualised care plans that consider the unique needs of older patients, improving

clinical outcomes, and facilitating continuity of care over time.¹¹ It is particularly effective in managing complex conditions such as chronic diseases, cognitive decline, and frailty, and helps prevent complications, reducing the likelihood of hospitalisation and re-hospitalisation.

Because older adults often take multiple medications (polypharmacy), increasing the risk of adverse drug interactions, multidisciplinary collaboration ensures thorough medication review, monitoring, and necessary adjustments.

Non-cardiovascular conditions are sometimes ignored, even when they have a relevant impact on overall outcomes or a negative impact on self-management (eg, cognitive impairment). Further efforts to defragment care, encompass non-cardiovascular conditions, and apply team-based care are important steps in managing older people with CVD. Care provision for the geriatric patient must integrate all the contributory risks:

1. the diagnosis and treatment of not only CVD but also other chronic diseases
2. targeted prevention of noncardiovascular events and cardiovascular complications and
3. efficient assessment of the functional impact of cardiovascular conditions on the patient's quality of life and independence



9. Working in Care Homes (CHs)

The care home represents a unique and distinct environment, in contrast to the practice setting. The abuse and neglect of older people in CHs is an ongoing and concerning issue. Residents may not be easily able to report experiences of abuse and neglect and may require others in their support network to recognise abuse and take action on their behalf. CH visitors, including visiting healthcare practitioners, can provide an important outside perspective and can identify signs of abuse and harm, and report these appropriately.

Residents of CHs have been widely identified as experiencing 'complex' health issues, including:

- multiple long-term conditions (and consequently complex medication regimes)
- polypharmacy
- physical frailty
- restricted mobility (making moving to a private place for examination difficult)
- dementia or other cognitive impairments
- difficulties in communication
- those who are at the end-of-life.

Other challenges facing healthcare practitioners who provide medical services to older patients in CHs include:

- navigating multiple relationships and communicating with a wide network of people, all of whom may have distinct backgrounds, perspectives and expectations
- balancing the needs and wants of the relatives, patient and care home staff, which are sometimes not aligned
- manage questions about what information can legitimately be shared, and with whom
- not always being able to understand care staff roles and the limits of their training and expertise, where communication is often poor, and the doctor's instructions for care aren't followed
- difficulties in explaining things to staff who are not highly trained
- quality of communication and record-keeping within the CH impacts the ease with which information is available to Healthcare Practitioners and may compromise residents' care and safety, especially in respect of prescribing
- requiring staff on duty to have a sufficiently detailed understanding of residents' health and any changes, as well as the reason the visit has been requested.

10. Rehabilitation in primary care for an ageing population

Healthy ageing is defined by the World Health Organisation as:

“the process of developing and maintaining the functional ability that enables well-being in older age”

And defines rehabilitation as:

“a set of interventions designed to optimise functioning and reduce disability in persons with health conditions in interaction with their environment”.

In 2019, an estimated 2.4 billion people worldwide had conditions that could benefit from rehabilitation. While prevention is essential to avoid or delay the occurrence of chronic diseases, rehabilitation is key to optimising function in individuals with existing health conditions and multimorbidity.

Rehabilitation is one of the most effective strategies and a critical health service for improving the functional abilities of the ageing population, especially as non-communicable diseases and multimorbidity become more prevalent. Alongside rehabilitation, prioritising health promotion activities is vital for disease prevention and improving the overall well-being of older adults. A focus on preserving independence, preventing or delaying disease, and treating disabilities is essential for enhancing the quality of life in older adults, including those already living with disabilities.

Healthcare professionals such as nurses, physiotherapists, occupational therapists, and

biokineticists play a vital role in supporting older adults to adopt and maintain a more active lifestyle. They help improve mobility, posture, and balance, and reduce the risk of falls, while also rehabilitating injuries and promoting safe exercise for those with chronic conditions. Common interventions include functional assessments, rehabilitation coordination, therapeutic exercises, psychological support, and self-management education.

The World Health Assembly (WHA) and the United Nations (UN) General Assembly declared 2021–2030 as the Decade of Healthy Ageing. The Decade has been defined as a priority area for action:

“deliver person-centred integrated care and primary health services that are responsive to older people”.

Although rehabilitation is a key person-centred health strategy for achieving the goals of The Decade of Health Ageing, health systems worldwide are generally not meeting the rehabilitation needs of older persons.

Primary care can play a key role in assessing and coordinating the rehabilitation process and is also well-placed to deliver rehabilitation interventions. The teamwork approach is very applicable here as sharing tasks between specialised rehabilitation professionals, primary care providers, carers, and volunteers enables the expansion of rehabilitation services and reduces the burden on specialised professionals.

Seijas et al. (2024) recommend five models for delivering rehabilitation to older persons in primary care:

1. **Community rehabilitation:** where rehabilitation is provided in a community

setting, such as a community centre or recreational area.

2. **Home rehabilitation:** where rehabilitation is carried out in the patient's home through visits, which is particularly helpful for older patients who may not be able to go to rehabilitation facilities, or who may be dependent on others for transportation.
3. **Tele-rehabilitation:** where rehabilitation is delivered using communication technologies, e.g. computers, telephones or smartphones, focusing on education, counselling, and skills training, including interventions such as self-directed therapeutic exercise education, caregiver education and training, weight management, and smoking cessation.
4. **Outpatient:** where patients receive rehabilitation in a healthcare facility and return home after the day's session(s).
5. **Eldercare:** where rehabilitation is provided in eldercare facilities such as assisted living, adult day care, long-term care, nursing homes and hospice care.

Rehabilitation interventions may focus on restorative and therapeutic exercises, activities of daily living (ADL) training, and psychological interventions such as cognitive training, behavioural, and motivational interventions. Education, skills training, exercise, and physical activity—traditional rehabilitation interventions—are realistic interventions to improve the functional ability and overall health of older persons. Seijas et al. (2024) reported the most common approaches according to age group:

Group 50 to 60 years

Most rehabilitation programs for this group focused on a single health condition, mostly *cardiovascular*, mostly in a community setting (43%), followed by

tele-rehabilitation (34%). Education and counselling, skills training for self-care and self-management were common interventions in this category. The dosage of most rehabilitation programmes in this group was pre-specified and had the lowest number of therapeutic sessions (10 in total) and programme length (8 weeks) compared with other age groups.

Group 60 to 70 years

The focus in this group was on single health conditions (76%) in a community setting. The most addressed were of *neurological origin* (46%), with stroke targeted in six studies. Common interventions in this category were education and counselling, assessment, and restorative and therapeutic exercises.

Group 70 to 80 years

Rehabilitation was provided to people with or at high risk of *functioning decline* (70%), mostly delivered in a community setting (45%), followed by rehabilitation at home (24%). Restorative and therapeutic exercises were the most common intervention in this category. This group received the highest frequency of sessions per week (2 sessions), the highest total number of sessions per patient (24 sessions) and had the longest total programme duration (20 weeks).

Group older than 80 years

In this group, people at risk of or with *functional decline* were the main focus. The most frequent delivery model used was home (40%), followed by eldercare and outpatient (20% each). The most common rehabilitation categories were restorative and therapeutic exercises and assessment. Rehabilitation dosage was very frequently

completely or partially adapted to the patient's needs. This group had the lowest median frequency of sessions, with only one session every two weeks.²⁶

Hospital records reveal that 9.2% of the expenditure was used on individuals in their last calendar year of life, suggesting that mortality-related expenditure is evident in the final days of an individual's life. The question is then, would we as healthcare providers not do much better for the patients and the economy if we had *more focus on prevention* than treatment? Regular physical activity and exercise go a long way in the prevention of many chronic diseases. It is possible to remain healthy, fit and strong, but only if action is taken to do what is required. Walking is one of the best ways to improve and maintain good health, and it's free. One of the most valuable things healthcare practitioners can do to help people improve the health and well-being of their patients is to make **exercise a vital sign**. Simply asking people if they exercise or walk for 30 minutes, 3 times per week, already raises their awareness. Following that up with an exercise prescription or referral to an exercise professional, such as a biokineticist, solidifies that important message. In other words, the focus should be on *prehabilitation* rather than just rehabilitation.

11. Priority areas for improving the health of older people in low- and middle-income countries

In South Africa, there is a need for higher awareness of chronic multimorbidity and more coordinated, long-term integrated care management across multiple chronic conditions, as well as attention to HIV in older populations.⁴

Solanki et al. (2021) make the following recommendations:

1. Placing greater emphasis on providing community care, primary care and palliative care for older adults. This may well require more restricted access to hospital care (and critical care in particular), with access limited to those cases where the prognosis is good
2. Strengthening programs for *prevention* of disease and declines in capacity via:
 - prevention, health promotion and self-management education
 - screening to facilitate *early diagnosis and intervention*
3. Ensuring effective management of chronic conditions via:
 - regular check-ups
 - necessary medication
 - incorporating home-based visits and support from appropriately trained community health workers in alignment with the WHO Global strategy and action plan on ageing and health, and Action Plan for the Decade for Healthy Ageing
 - telemedicine programs
4. Pre-habilitation exercise and lifestyle modification prescriptions
5. Empowering people to be more accountable for their health

12. Tips to support older patients

1. ***Pre-habilitation and rehabilitation:*** to avoid or successfully manage a chronic condition, prescribe exercise/ walking, or refer the patient to a biokineticist
2. ***Physical considerations:*** Awareness of age-related changes, mobility issues and physical limitations such as osteoporosis, degenerative joint disease or arthritis.

- Space for supporting aids such as wheelchairs and walking aids, and people helping the elderly.
 - Offering assistance if they have difficulty getting in and out of the chair or on/off the examination bed will be welcomed.
 - Providing handrails or support can make the process easier and less stressful.
 - Good positioning can greatly enhance their comfort during examinations or procedures, e.g. providing pillows can help older patients maintain a comfortable position.
3. **Temperature:** Older adults can be more sensitive to temperature changes. Using a blanket, if necessary, will help to keep them warm.
 4. **Empathy and patience:** Older patients are more vulnerable than those who are younger and may have increased anxiety and fear when undergoing any medical intervention. Using a gentle approach, showing care, patience (being mindful of possible hearing and sight problems), and understanding of their physical and psychological state will help these individuals be more at ease.
 5. **Frequent breaks:** Allow for frequent breaks during longer appointments to stretch or use the restroom if needed. This can help prevent stiffness and discomfort.
 6. **Caregiver and or family involvement:** Encourage the presence of a family member or caregiver if it provides comfort and support to the patient. Communication with caregivers, keeping them informed about the action plan, procedure and any follow-up instructions.
 7. **Knowledge:** Providing educational materials in simple language about healthcare tailored to their needs, including the importance of follow-up visits, health promotion, proper hygiene, etc. can help the patient feel comfortable, build trust with their healthcare practitioner and take personal responsibility for their health.
 8. **Follow-up and support:** Providing clear instructions about the treatment plan. Following up with a phone call or appointment to ensure that patients are recovering well and addressing any concerns promptly can make older patients feel valued and supported.



13. Conclusion

As the global population continues to age, healthcare practitioners are increasingly tasked with addressing a myriad of complex health challenges among older adults. From chronic conditions like hypertension and diabetes to multifaceted issues such as cognitive impairment and geriatric syndromes, the spectrum of care required is vast and diverse.

To effectively support older patients, it is essential to prioritise patient-centred care principles. This includes creating a welcoming environment, building partnerships with patients, ensuring clear and respectful communication, and allocating adequate time for consultations. Embracing a multidisciplinary teamwork approach and

collaborative care model further enhances the quality of care provided, particularly in settings like care homes and primary care facilities.

Looking ahead, there is a growing need for healthcare strategies that address the unique needs of older adults, especially in low and middle-income countries where resources may be limited. By focusing on preventive measures, early intervention, and rehabilitation, healthcare practitioners can significantly improve the health outcomes and quality of life for their older patients.

In essence, commitment to understanding and addressing the challenges faced by older adults is paramount. By integrating these insights into practice and advocating for holistic, patient-centred care, healthcare practitioners can better meet the evolving healthcare needs of the ageing population.

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QUESTIONNAIRE

G2(25) Part 1 of 3

The aging population - general considerations for healthcare practitioners

INSTRUCTIONS

- Read through the article and answer the multiple-choice questions provided below.
- **Some questions may have more than one correct answer;** in which case you must mark **all** the correct answers.

Question 1: Which of the following are reasons for the increase in longevity? Select all three correct options.

- A. Decline in deaths from cardiovascular disease
- B. Food security in the context of easy access to fast foods
- C. Improved health management and effective health interventions
- D. Decreased environmental hazards and access to better sanitation

Question 2: Which of the following are included in the nine cellular and molecular hallmark factors that have been identified with aging?

- A. Telomere shortening
- B. Deregulation of nutrient sensing
- C. Mitochondrial dysfunction
- D. Impaired intercellular communication

Question 3: By 2030, one in six people in the world will be aged 60 years or older, rising to 2.1 billion by 2050 (nearly double what it was in 2015).

- A. TRUE
- B. FALSE

Question 4: In South Africa the growth rate of the over-60 population is 2.7% per annum, nearly _____ the rate for the population under 60?

- A. Half
- B. Twice
- C. Three times
- D. Four times

Question 5: In South Africa, the three health conditions that are the most common among older persons are?

- A. Back and neck pain
- B. Hypertension
- C. Diabetes
- D. Asthma

Question 6: Which of the following are included in the 10 common chronic conditions for adults 65+years? Select all three correct options.

- A. Obesity
- B. Chronic kidney disease
- C. Ischemic heart disease
- D. Hearing and eyesight problems

Question 7: Which one of the following is **NOT** a recommendation to prevent or manage hypertension?

- A. Encourage regular physical activity
- B. Emphasise maintaining a healthy weight
- C. Encourage Himalayan salt intake
- D. Encourage a reduction in salt and alcohol intake

Question 8: For a patient who has dyslipidemia, what is the exercise recommendation?

- A. High intensity interval training on 2-3 days of the week
- B. 250–300 minutes per week of moderate intensity aerobic exercise
- C. Daily stretching exercises
- D. Strength or resistance training on 5 days of the week

Question 9: Obesity impacts about 42% of adults over the age of 60 and can increase the risk for conditions like heart disease, type 2 diabetes, and some cancers.

- A. TRUE
- B. FALSE

Question 10: Which of the following are health benefits from regular exercise participation in individuals with T2DM?

- A. Preventing multiple diabetes-related health complications
- B. Improved glucose tolerance
- C. Decreased insulin sensitivity
- D. Improvements in multiple CVD risk factors and overall quality of life

Question 11: Which of the following are the greatest risk factors for kidney damage? Select both correct options.

- A. Genetics
- B. Diabetes
- C. Hypertension
- D. Age

Question 12: Pain and mobility issues, arthritis and falls are other things that the elderly are dealing with. A biokineticist can help with which of the following?

- A. Appropriate exercises that are safe to do
- B. Exercises that will alleviate pain and joint stiffness
- C. Improve joint mobility, strength, balance and coordination and confidence in their movements
- D. Exercise is not recommended for these patients

Question 13: Frailty is a condition of particular interest that may represent a transitional phase between successful aging and disability.

- A. TRUE
- B. FALSE

Question 14: Falls can be caused by almost any drug that acts on the brain or on the circulation. The mechanism that leads to a fall includes all of the following **EXCEPT**?

- A. Sedation
- B. Hypotension
- C. Bradycardia, tachycardia or periods of asystole
- D. Hypertension

Question 15: Multimorbidity refers to the presence of _____ chronic conditions?

- A. One or more
- B. Three
- C. Two or more
- D. Five

THE END

QUESTIONNAIRE

G2(25) Part 2 of 3

The aging population - general considerations for healthcare practitioners

INSTRUCTIONS

- Read through the article and answer the multiple-choice questions provided below.
- **Some questions may have more than one correct answer;** in which case you must mark **all** the correct answers.

Question 1: The prevalence of multimorbidity in older adults in rural South Africa is high. *Chang et al.* (2019) found that people aged 60–69 have the highest proportion ofconditions, higher than any other age group except ages 80 and above?

- A. Three
- B. Two
- C. Four or more

Question 2: Summary findings from the *Chang et al.* (2019) study includes all of the following **EXCEPT**?

- A. Wealthier groups suffered more from cardiometabolic conditions
- B. Females had a significantly higher number of chronic conditions
- C. People living with HIV have a high prevalence of multimorbidity
- D. Males had a significantly higher number of chronic conditions

Question 3: In a retrospective study of older patients with CVD and who were admitted to a cardiology department, the prevalence of polypharmacy far exceeded that observed in the general population. On average, patients were treated with _____ drugs at home?

- A. 4
- B. 11
- C. 6
- D. 8

Question 4: Strategies that can improve medicine use and limit the occurrence of significant drug interactions among the older patient population include which of the following?

- A. Rational medicine review
- B. Deprescribing
- C. Incorporation of pharmacist recommendations
- D. Prescribing **placebo** medications

Question 5: Which of the following is **NOT** one of the drug classes most commonly implicated in ADRs?

- A. Cardiovascular system drugs
- B. Psychotropic drugs
- C. Nervous system drugs
- D. Anti-infectives for systemic use

Question 6: Which of the following is **NOT** a reason why NSAIDs should be used with caution when treating older people?

- A. They can increase the risk of stomach ulcers bleeding.
- B. They can increase blood pressure
- C. They can affect the kidneys or make heart failure worse
- D. They can suddenly lower the blood pressure

Question 7: Which of the following is **TRUE** regarding the use of digoxin in older people?

- A. It can be toxic, especially in those with kidney problems
- B. Increases the risk of bleeding
- C. Can cause dangerously low blood pressure
- D. Can cause dry mouth and blurry vision

Question 8: Which of the following are some disorders and symptoms that can be worsened by drugs in older people?

- A. Dyslipidemia
- B. Chronic kidney disease
- C. Risk of falls
- D. Heart failure

Question 9: Which of the following are potential candidates for medication review? Select all three correct options.

- A. All patients in care homes age >50 years
- B. Patients who are aged 75 and over
- C. Patients who are taking 10 or more medicines
- D. Patients who are <50 years

Question 10: Which one of the following is **NOT** an example of a validated brief cognitive assessment that can be used in older patients?

- A. Blessed Orientation Memory Concentration
- B. Memory impairment Screen
- C. Rapid Cognitive Screen
- D. Short Informant Questionnaire on Cognitive Decline in the Elderly

Question 11: Impaired mental status occurs in approximately one quarter of all older patients presenting to the emergency department as a result of delirium, dementia, or both.

- A. TRUE
- B. FALSE

Question 12: Which of the following are risk factors for cognitive impairment?

- A. Hypertension
- B. Diabetes
- C. Social isolation
- D. Lack of physical activity
- E. Depression

Question 13: Depressed older adults (≥ 65 years) often do not receive adequate psychological care, and have a 2–3 times lower chance of being referred for a guideline-focused psychological treatment.

- A. TRUE
- B. FALSE

Question 14: Which of the following do older people value when they visit their healthcare practitioner? Select all three correct options.

- A. The healthcare practitioner being the sole decision maker
- B. A welcoming and supportive environment
- C. Partnership building, patient involvement and respect
- D. Enough time

Question 15: Some things that can be done to show more care include engaging with the person and listening carefully, being compassionate and non-judgmental and including them in the situation respectfully.

- A. TRUE
- B. FALSE

THE END

QUESTIONNAIRE G2(25) Part 3 of 3

The aging population - general considerations for healthcare practitioners

INSTRUCTIONS

- Read through the article and answer the multiple-choice questions provided below.
- **Some questions may have more than one correct answer;** in which case you must mark **all** the correct answers.

Question 1: Which of the following are non-verbal communication strategies that can positively affect patient-centred outcomes?

- A. Comfort touch
- B. Smiling
- C. Nodding in agreement
- D. Emotional support

Question 2: Which of the following are good reasons to have enough time when caring for older people? Select all three correct options.

- A. Thorough physical examination is essential with each visit
- B. Movement and communication may be slower
- C. They often have multiple concerns to discuss during a single visit
- D. Feeling rushed can lead to anxiety, decreased patient satisfaction and reduced compliance

Question 3: Which of the following will **NOT** improve patient-centred care?

- A. Explaining the procedure, its purpose, and potential outcomes
- B. Ensuring comprehension of procedures, risks, and follow-up instructions,
- C. Treating patients as a whole and involving older patients in decision-making
- D. Strictly using medical terminology

Question 4: A multidisciplinary approach involves collaboration among healthcare professionals (e.g., doctors, nurses, physiotherapists, biokineticists, dieticians, psychologists, social workers) to address all aspects of an older patient's health, including physical, mental, emotional, and social well-being.

- A. TRUE
- B. FALSE

Question 5: _____ is one of the most effective strategies, and a critical health service for improving the functional abilities of the ageing population, especially as non-communicable diseases and multimorbidity become more prevalent.

- A. Rehabilitation
- B. Biologicals
- C. Nutritional supplements

Question 6: Which of the following is **NOT** one of the five models for delivering rehabilitation to older persons in primary care as recommended by *Seijas et al.* (2024)?

- A. Community rehabilitation
- B. Home rehabilitation
- C. Tele-rehabilitation
- D. Hospital rehabilitation

Question 7: Which of the following is correct regarding the 60 to 70 year age groups in the study by *Seijas et al.* (2024)?

- A. Most rehabilitation programs for this group focused on a single health condition, mostly cardiovascular
- B. In this group people at risk of or with functional decline were the main focus
- C. The most addressed conditions were of neurological origin
- D. Rehabilitation was provided to people with or at high risk of functioning decline

Question 8: Which of the following is **NOT** a priority area for improving the health of older people in low and middle income countries?

- A. Placing greater emphasis on providing community care, primary care and palliative care for older adults
- B. Rehabilitation programs only as required
- C. Strengthening programs for prevention of disease and declines in capacity
- D. Ensuring effective management of chronic conditions
- E. Pre-habilitation exercise and lifestyle modification prescriptions

Question 9: Which of the following are included in 10 tips to support older people?

- A. Pre-habilitation and rehabilitation
- B. Allowing the caregiver or family member to make the decisions
- C. Empathy and patience
- D. Caregiver and / or family involvement

Question 10: Providing clear instructions about the treatment plan, following up with a phone call or appointment to ensure that patients are recovering well and addressing any concerns promptly can make older patients feel valued and supported.

- A. TRUE
- B. FALSE

THE END



MEMBER INFO

(Complete sections marked with an asterisk *)

ANSWER SHEET

*FOH number

*HPCSA number

ID number

Personal details, if any changes

I hereby declare that the completion of this document is my own effort without any assistance.

SIGNED:

DATE:

This activity is accredited for EIGHT (8) CLINICAL CEU'S. You have to achieve 70% to pass this activity.

G2(25)

The aging population General considerations for healthcare practitioner

*Time spent on activity						hour					min						
PART 1						PART 2					PART 3						
	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1						1						1					
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