

Chronic Illness in Seniors

Defining Generic Key Terms and Concepts

- **Chronic Conditions or Illnesses:**

Chronic conditions are impairments or illnesses that have no cure but result in persistent or recurring health consequences that last for years. They are the most prevalent health problem and tend to be more disabling in seniors than in younger age groups. Four in five seniors have at least one chronic health problem, and one in three have activity limitation associated with those conditions (Vierck & Hodges, 2003).

While many seniors continue to lead active and productive lives even with chronic conditions, they generally notice a progression of severity as they get older. Among seniors, 45% of those ages 75 and older are limited in activities because of chronic conditions, compared to 34% of those ages 65 to 74 and 23% of those ages 45 – 64 (National Academy on an Aging Society, 1999). These conditions can demand extensive caregiving, whether informal (by family or friends) or formal (home or institutional care), as well as significant spending for health care.

- **Explain the impact of chronic illness on seniors:** Chronic illness has a dramatic effect on seniors, most significantly by reducing their quality of life and ability to remain independent in their own homes. It increases family pressures by placing demands for caregiving on spouses and children. It also hinders seniors' ability to enjoy favourite activities and increases out-of-pocket spending on prescription drugs, physician visits, diagnostic procedures, and hospitalizations. Often, these dollars must come from savings and retirement income. An American study by the Alliance for Aging Research (AAR, 1999) revealed that it is not the big killers like cancer and heart attacks that most rob seniors of their independence; rather, it is under recognized and under treated chronic conditions such as diabetes, arthritis, cognitive impairments, and physical immobility.
- **Hypertension:** Hypertension refers to High Blood Pressure, which is a leading risk factor for heart disease, stroke, and kidney disease; and is a serious health issue for about 15% of the adult population. The arteries that carry blood from the heart to various organs in the body harden, become less elastic, and blood pressure increases as the heart has to contract more strongly to move blood around the body.
- **Symptoms of a heart attack, including the difference between men and women**
In the majority of patients, there is no identifiable event that triggers the heart attack – no one knows exactly when a coronary artery will *occlude*, or become blocked. The individual may state that he or she has crushing pain, vice-like squeezing, or a heavy

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weight on his or her chest. The pain may be accompanied by profuse sweating, shortness of breath, nausea, or extreme weakness. The signs of heart attack in *women* may be more subtle or different in nature, manifested by feeling breathless, unexplained fatigue, and feelings of anxiety. Chest pain may or may not be present. If the person's blood pressure drops significantly or the heart rhythm becomes too fast or highly irregular the person may lose consciousness. If such an event occurs in your presence, remain with the individual and call for an ambulance. Never attempt to take the individual to the hospital yourself as the person's condition might deteriorate during transport.

- **As a PROFESSIONAL, your role in dealing with seniors with heart disease may be three-fold—list how you might help and what you might be aware of?**

As a PROFESSIONAL you should be aware that high cholesterol, high blood pressure, smoking, obesity, and sedentary lifestyle significantly increase the incidence of coronary heart disease. Encourage senior clients to seek appropriate medical assessment and make changes to alleviate these factors. Second, learn about angina and the symptoms of a heart attack and learn cardiopulmonary resuscitation (CPR), a procedure that could be lifesaving. Third, offer assistance that supports the patient and family as the person moves through recovery toward resuming normal activities following a heart attack or bypass surgery.

- **Stroke:** A stroke occurs when a clot suddenly interrupts the blood supply to part of the brain or when a blood vessel within the brain bursts, spilling blood into the surrounding space. As a result, some brain cells die immediately while others remain at risk of dying. These damaged cells can linger in a compromised state for several hours. Fortunately, timely treatment can save these compromised cells. There are two forms of stroke, *ischemic stroke* and *hemorrhagic stroke*.

Ischemia is the term used to describe the loss of oxygen and nutrients to brain cells when there is inadequate blood flow. An ischemic stroke occurs when an artery supplying the brain with blood suddenly becomes blocked, which decreases or stops blood flow to the brain. Ultimately this causes a brain *infarction*, or death of brain cells. This type of stroke accounts for approximately 80 percent of all strokes. Blood clots are the most common cause of artery blockage and brain infarction. **Hemorrhagic** strokes occur when an artery within the brain bursts, spewing blood into the surrounding tissue. This upsets not only the blood supply but also the delicate chemical balance brain cells need to function. This type of stroke, which accounts for approximately 20% of all strokes, can occur in several ways. One common cause is an aneurysm, a weak or thin spot on an artery wall. These weak spots stretch or balloon out over time under high arterial pressure. The thin walls of these ballooning aneurysms can rupture and spill blood into the space surrounding brain cells. Hemorrhage also occurs when arterial walls break open. For instance, a plaque-encrusted artery wall eventually loses its elasticity and becomes thin and brittle. This

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makes the artery prone to cracking. Combined with high blood pressure, a brittle artery wall is at risk of giving way and spewing blood into the surrounding brain tissue.

- **Type I and Type II Diabetes:** There are two major types of diabetes, Type 1 and Type 2.

Type 1 diabetes, previously known as *insulin-dependent* diabetes mellitus (IDDM), or *juvenile onset diabetes*. In general 10% of diabetics have Type 1 diabetes and these individuals tend to be children or adults under age 40 who experience a sudden onset of symptoms. Their bodies produce no insulin and they must use insulin injections, or more recently, internal insulin pumps, to provide the insulin necessary to control blood glucose. Symptoms of Type 1 diabetes include excessive thirst, constant hunger, excessive urination, sudden weight loss for no reason, rapid or difficult breathing, sudden vision changes or blurry vision, weakness, drowsiness, exhaustion or fruity odor on the breath (JDF, 2004)

Type 2 diabetes, previously known as *non-insulin dependent* diabetes mellitus (NIDDM) or *adult-onset diabetes*, accounts for 90% of all cases of diabetes. Most often, type 2 diabetes appears gradually after the age of 40. Symptoms include hard to heal skin, gum or urinary tract infections, drowsiness, tingling hands and feet, excessive urination, excessive hunger and thirst, and itching of skin and genitals. Individuals with Type 2 diabetes produce insulin but either do not make it in sufficient quantities or have cells that resist its actions. The genetic link – or tendency to run in families – is even greater in Type 2 diabetes than in Type 1.

In 2000, the World Health Organization estimated that over 177 million people had diabetes. By 2025, this figure will top 300 million.

The face of diabetes is changing in around the world. Approximately 10% of people with diabetes have type 1 diabetes. However, the number of people with type 2 diabetes is increasing dramatically due to a number of factors:

- The population is aging.
- Obesity rates are rising.
- North American lifestyles are increasingly sedentary.
- Aboriginal people are three to five times more likely than the general population to develop type 2 diabetes.
- There is a growing incidence of type 2 diabetes in children from high-risk populations. Recent data suggests an American child born in 2000 stands a one in three chance of being diagnosed with diabetes in his or her lifetime.

The financial burden of diabetes and its complications on people with the disease and on the healthcare system is enormous. People with diabetes incur medical costs that are two to three times higher than those without diabetes. A person with diabetes can face direct costs for medication and supplies ranging from \$1,000 to \$15,000 a year.

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Prevention of type 2 diabetes: To date there is no proven way to prevent type 1 diabetes. The onset of type 2 diabetes may be prevented or delayed, through increased physical activity, healthy eating, weight loss, not smoking and stress reduction. Taking these steps now can lead to a healthier future. In a large study, people at risk of type 2 diabetes were able to reduce that risk by 58% by exercising moderately for 30 minutes a day and by losing 5 to 7% of their body weight. **In people over age 60, the risk was cut by almost 71%.** Other large studies have shown similar results in reducing risk.

(Canadian Diabetes Association website)

How does 'rheumatoid arthritis' differ from 'osteoarthritis'? What is 'osteoarthritis'? And can it be cured?

Arthritis and Osteoarthritis:

Live long enough and you can pretty much count on developing arthritis: a touch of osteoarthritis, at the very least.

Arthritis ('arth' meaning joint, 'itis' meaning inflammation) isn't a one-note story or even a few variations on a single theme; it actually consists of more than 100 different conditions. These can be anything from relatively mild forms of tendinitis (as in 'tennis elbow') and bursitis to crippling systemic forms, such as rheumatoid arthritis. There are pain syndromes like fibromyalgia and arthritis-related disorders, such as systemic lupus erythematosus, that involve every part of the body. There are forms of the disease, such as gout that almost nobody connects with arthritis, and there are other conditions - like osteoarthritis, the 'wear and tear' arthritis - that a good many people think is the only form of the disease. True, many older people do have arthritis, but it's not just a disease of the old. Some forms of arthritis affect children still in diapers, while thousands of people are stricken in the prime of their lives. The common denominator for all these conditions is joint and musculoskeletal pain, which is why they are grouped together as 'arthritis.' Often that pain is a result of inflammation of the joint lining. Inflammation is involved in many forms of arthritis. It is the body's natural response to injury. The warning signs that inflammation presents are redness, swelling, heat and pain.

Rheumatoid arthritis is the most common form of inflammatory arthritis and crosses all ethnic, racial, and age groups. Typically, rheumatoid arthritis is diagnosed among 40 -50 year olds. Studies indicate that women are three times more likely to develop the condition than men (Long, 1997). It can cause severe pain and crippling deformities, such as gnarled, misshapen fingers.

Osteoarthritis is the most common form of arthritis. It is also known as degenerative joint disease (DJD). Osteoarthritis is classified as non-inflammatory arthritis. This suggests that there is no inflammation (swelling), but recent research shows that this is not true. Although there is usually no swelling in the early stage of the disease, as the arthritis progresses there can be inflammation. Bits of cartilage may break off and float around inside the joint. This disturbs other soft tissues inside the joint and can cause pain and swelling between bones. The result is you may have trouble moving the joint.

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Over time as the cartilage wears down, the bones may form bumps on their ends. These bumps are called spurs. Or, the cartilage may wear away entirely, and your bones may rub together.

OA may lead to other problems such as:

- The muscles that hold the joint in place weaken because they are not being used.
- Over time, the joint loses its shape and does not work at all.

It affects men and women in equal numbers.

Most people develop osteoarthritis after the age of 45, but it can occur at any age.

OA commonly affects weight-bearing joints such as hips, knees, feet and spine. However, non-weight bearing joints such as finger joints and the joint at the base of the thumb may be affected as well. It usually does not affect other joints, except when they have been injured or been put under unusual stress.

The exact cause is unknown. The chances of getting osteoarthritis seem to increase with age.

Some people with osteoarthritis have other family members with it. Being overweight can increase your risk of getting osteoarthritis. Excess weight puts stress on joints such as hips and knees. Injury to a joint or repeated overuse of it can also damage the cartilage and lead to osteoarthritis. Other types of arthritis can also damage joints and lead to osteoarthritis.

Researchers now think that there are several factors that may increase your risk for getting OA. Key risk factors include: heredity; excess weight; injury; joint damage from another type of arthritis. For example, Canadian researchers have identified some of the enzymes that damage the cartilage in osteoarthritis. Blocking these enzymes may be one way to slow down the progression of the disease.

Although there is no cure for OA, a lot can be done to help manage the condition. A variety of treatments can help to lessen pain and stiffness and to make movement easier. Your active involvement in developing your prescribed treatment plan is essential. (Arthritis Society of Canada website)

How can a PROFESSIONAL play an important role with seniors who are dealing with arthritis pain?

The PROFESSIONAL's role is to help dispel the misperception that arthritis is just a normal part of aging that seniors must endure. Seniors should be encouraged to not just accept the pain and discomfort but to pursue effective therapies available. A PROFESSIONAL should also take steps to ensure their office or client/customer environment is user-friendly for clients with arthritis who may have limited mobility.

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Osteoporosis:

Osteoporosis is a progressive disease that causes bones to become thin, porous, and weak (WebMD, 2003). The loss of bone mass is part of the natural aging process; however those with osteoporosis have accelerated loss. Anyone who does not develop sufficient bone mineral density in youth is apt to develop osteoporosis in later life. However, women are more likely to have the disease, 80% of those suffering are women. Osteoporosis is often called the “silent disease” because symptoms do not appear in its early stages. As the disease progresses symptoms, like back pain, loss of height and stooped posture, a curved spine and bone fractures, especially in the hip, back, vertebrae and wrists may occur. A diagnosis of *Osteopenia*, often called pre-osteoporosis, indicates that one’s bone mineral density is lower than normal but bones have not yet thinned to the point of osteoporosis. Treatment includes a diet rich in calcium and vitamin D, appropriate regular exercise (preferably weight bearing), and certain medications to increase bone thickness.

Cancer:

Cancer is a disease that starts in our cells. Our bodies are made up of millions of cells, grouped together to form tissues or organs such as muscles and bones, the lungs, or the liver. Genes inside each cell order it to grow, work, reproduce and die.

Normally, our cells obey these orders and we remain healthy. Sometimes a cell’s instructions get mixed up and it behaves abnormally. After a while, groups of abnormal cells can form lumps or tumours, or can spread through the bloodstream and lymphatic system to other parts of the body.

Tumours can be either benign (non-cancerous) or malignant (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening.

Malignant tumour cells are able to invade the tissues around them and spread to other parts of the body. Cancerous cells that spread to other parts of the body are called metastases. The first sign that a malignant tumour has spread is often swelling of nearby lymph nodes, but cancer can metastasize to almost any part of the body. It is important to find malignant tumours early and treat them.

Cancers are named after the part of the body where they start. For example, cancer that starts in the colon but spreads to the liver is called colon cancer with liver metastases.

- **How can a PROFESSIONAL play a potential role in dealing with seniors (and their families) who have faced/are facing cancer?**

As a PROFESSIONAL you can play a role in recognizing the reality of the emotional impact that a senior and those close to the senior are going through and help them to find sources of support and information.

- **What are some of the barriers to adequate pain management? How might you, as a PROFESSIONAL, serve as an advocate?**

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Inadequate pain management is widespread, especially among minority groups and ethnic populations. For example, one study of outpatients with cancer revealed that 65% of minority patients were under treated for pain compared to only 50% of non minority patients (McCafferey, 1999). One major factor in appropriately treating pain is making an accurate judgement about the level of pain being experienced given that each person has their own specific pain tolerance level. Emphasis must be placed on accepting the *patients'* assessment of their pain rather than make judgements about whether the reported level of pain is appropriate to diagnosis or patient circumstance. It can be difficult to properly assess the level of pain in patients with dementia, but facial expressions, behaviour and changed activity levels can give clues. A leading cause of under treatment of pain is fear of drug addiction or dependency. Under treatment of pain in seniors can result from their ineffectively managing their medication by not using the word pain to describe their discomfort to health care workers, or they may mistakenly accept that pain is part of the aging process and not seek treatment. As a PROFESSIONAL you can serve as an advocate for senior clients who are experiencing ongoing activity-limiting pain by encouraging them to seek additional medical care from those who recognize the validity of their pain and aggressively work to manage it.

Additional Thought-Provoking Questions:

Hypertension, has another common name what is it? (High Blood Pressure) This problem is a leading risk factor for what major medical problems (Heart Disease and Stroke) What are the most common causes of hypertension (smoking, high cholesterol, being overweight, and drinking too much alcohol.)

A boomer you are talking to mentions that both his father and grandfather died of strokes. This tells you that this person's chances of having a stroke are 2 times higher than a family without this history. What are the warning signs or symptoms of a stroke? List some.

Warning signs or symptoms of a stroke include sudden numbness or weakness in the face, arm, or leg especially on one side of the body; sudden confusion or trouble speaking or understanding; sudden trouble seeing in one or both eyes or having double vision; sudden trouble walking, dizziness, loss of balance or coordination, or drowsiness; sudden severe headache with no known cause; nausea or vomiting.

Sometimes the warning signs may last only a few moments and then disappear. These brief episodes, known as transient ischemic attacks or TIA's, are sometimes called "mini-strokes". Although brief, they identify an underlying serious condition that won't go away without medical help. Unfortunately, since they clear up, many people ignore them. Paying attention to these signals may save a life. Is there treatment for strokes, if so, what is it?

The type of stroke therapy a patient receives largely depends on the stage of the disease. Generally, there are three treatment stages for stroke: prevention, therapy immediately after the stroke, and post stroke rehabilitation.

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You are speaking with a senior who tells you that she has ‘diabetes’. What she is really telling you is that her body can’t do what? She also has some serious health problems as a result of this medical condition; can you name some of the concerns and problems she may be facing?

The senior is telling you her body either does not produce insulin at all (Type 1) or it does not produce it in sufficient amounts (Type 2). Diabetes results from the body’s inability to properly use glucose, one of the principal sources of cellular energy. When the body converts the food we eat into glucose, *insulin*, (made by the pancreas) helps deliver the glucose to cells and stores any excess for later use. However, when insulin is either insufficient or altogether absent, glucose builds up within the bloodstream and cells are unable to get the energy source needed to continue their functions.

Approximately 90% of people (including seniors) have *Type 2 diabetes* – which is also known as “*adult onset diabetes*” or “*non-insulin dependent diabetes mellitus*”. Symptoms include hard to heal skin, gum or urinary tract infections, drowsiness, tingling of hands and feet, excessive urination, excessive hunger and thirst, and itching of skin and genitals.

During the course, as a PROFESSIONAL, you should also be listening for the following:

- Prevention of arthritis
- Osteoporosis and its impacts on women especially
- Which is the chronic disease that can cause blindness, that has no cure but is manageable, that affects 1 in every 4 people by age 70? (answer: diabetes)

