

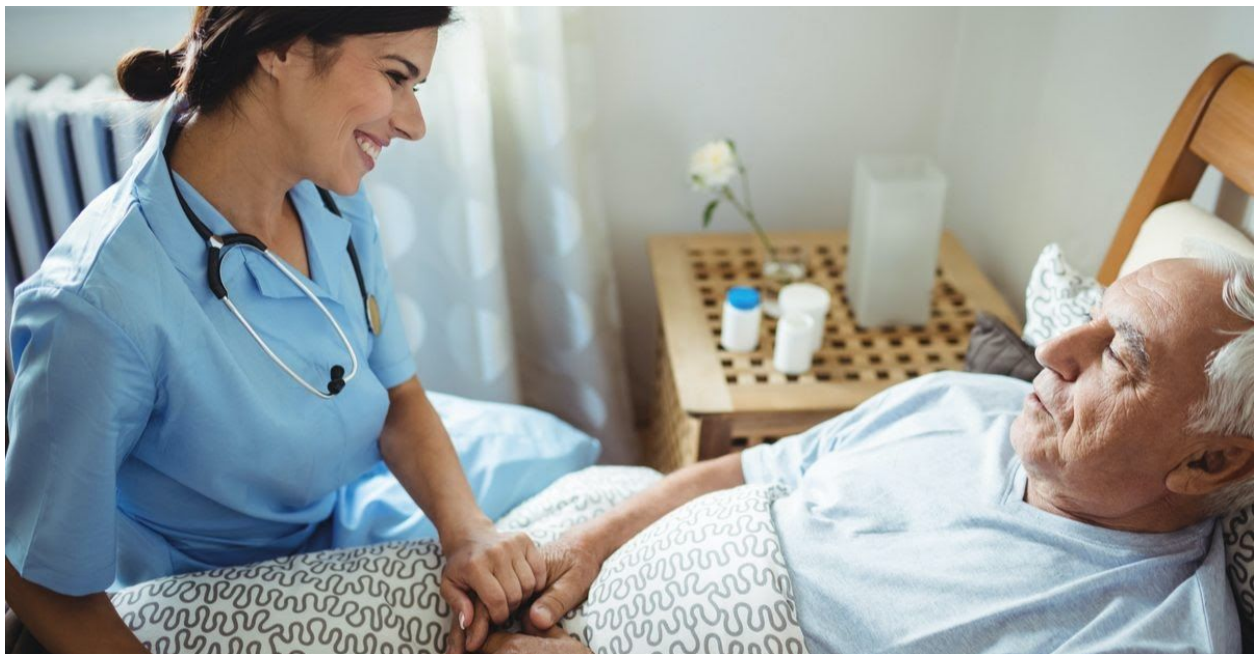
## What is Home Healthcare?

The rise of home healthcare services means more freedom for medical cannabis patients. While [Ryan's Law](#) made cannabis available in Californian hospitals, most [federally funded](#) institutions, do not allow cannabis on the premises. This includes long term care facilities, hospitals, and hospice centers. Accordingly, medical cannabis consumers want better control over their care choices and personal well being. Lack of access may contribute to the [projected rise in demand](#) for home healthcare.

Without a doubt, in North America, the population growing most rapidly is older adults (seniors). And as the Baby Boomers age, the healthcare industry is shifting. This is away from an expensive government-funded institutional model to one of home healthcare.

For Americans, home healthcare [cost is lower](#) than a hospital stay, while in Canada, the cost may be mostly out-of-pocket. Canada has a nationally funded medical system that is paid for by taxes. While some of this supports home care costs, there are other costs. Regardless, whichever [side of the border](#) seniors live, additional home health cost can be expected. These may include: physio, personal care, cost of a home care nurse, transportation, and retrofitting the home for mobility and safety.

This article focuses on the long term care needs of an aging population as this applies to home care services.



## The Definition of Home Healthcare

Broadly, home healthcare refers to medical services received in a personal residence instead of a healthcare facility or community care center. This can entail anything from a few visits to long term palliative support. Home care services are regulated by the government, but it looks different than protocols in place within federal supported facilities, like a hospital.

Home healthcare is meant to assist those who are not in need of acute care. It is often a bridge from hospital care to independent living. However, there are some long term care circumstances, such as the case of dementia. Finally, there are palliative care options that help patients die at home.

## **What to Expect From Home Care Services**

Patients will be able to access a wide range of medical services, including: a home care nurse (dispensing medicine, changing wound dressing, nutrition counseling); personal care services (bathing, changing, transportation); use of medical equipment or supplies (oxygen equipment, wheelchair, walker). All of these services will be prescribed and recommended by a doctor or other qualified healthcare professional.

## **Professionals That Help with Home Healthcare**

These are the people who could make the home healthcare team:

### **Home Care Nurse**

Nurses will oversee the overall health plan for each patient. He or she will consistently assess and monitor overall health through the recording of vital signs, dispensing of medications, wound and ostomy care, changing catheters, ventilator management, and diabetic monitoring.

### **Physiotherapist**

Hands-on treatment to improve patient mobility, strength, and functioning. Physiotherapy may be used in rehabilitation as well as preventative care.

### **Dietician**

Educate patients on how to assemble a diet that promotes overall wellbeing. Nutrition professionals understand the science of food and nutrition and how these impact health.

### **Social Worker**

A social worker can help families and individual patients access mental health services, financial assistance, and help manage complex situations. This individual will be able to connect the patient (and his or her family) to needed community resources.

## Personal Support Worker

Provide assistance with everyday tasks and may be called a Personal Support Worker (PSW). These people are important in helping patients safely stay at home. Services include: lifting and transfer, toileting, bathing, escort to events, light housekeeping, medication reminders, laundry, feeding, meal preparation.



## Government Regulation of Home Healthcare

### Canada

Canada saw the writing on the wall with its aging population. In 2017, it decided to make home care services [more widely available](#). Canada created a ten-year federal, provincial, and territorial agreement to invest \$11 billion of federal money toward improving home healthcare and [mental health](#) services. In exchange, the provinces and territories have agreed to fulfill a common set of objectives toward improving home healthcare and mental health services.

The Canada Health Act does not insure home care services in the same way it does hospital stays and doctor office visits. There are transfer payments made to individual provinces to support home healthcare initiatives, but it is then largely regulated by provincial and municipal governments. This makes coverage inconsistent and can mean for long wait times. Additionally, there are no uniform standards of care and no federal oversight. Home support services are a mixture of provincial and private funding.

### America

[Research](#) published in the *Journal of General Internal Medicine* (2018) [2], found that it would cost approximately fifty two per cent *less* to treat in-home compared to in-hospital. Further, in 2019 it was projected that the annual growth rate for spending on home care is almost seven percent. These [easily surpass](#) the growth in nursing home care and community care centers.

In 2017, the federal government, in America, created a [set of rules](#) under which home health agencies can participate in [Medicare and Medicaid](#) programs. These apply to every state, effectively creating a uniform standard of care for patients engaging in home care services.



## **Can a Home Care Nurse Give Cannabis Medicine?**

Medical cannabis has been federally legal in Canada since 2001. Subsequently, [recreational cannabis](#) was approved for adult use in 2018. As a result, Canadians have wide access to cannabis flower plus edibles and [concentrates](#). Canadian adults are allowed to possess 150 grams of dried cannabis, but they are still prohibited from consuming in some areas. Designated areas must be used, and since many long term care facilities are privately owned, those companies are able to make their own rules and regulations around cannabis. As a result, older adults in Canada might not be able to access the medicine of choice in a nursing home.

In America, similar restrictions and allowances exist, but these can be more difficult to navigate as there are state-by-state differences. Alarmingly, many older adults looking into long term care options report that it is [extremely difficult](#) to find a nursing home or community care center that allows the consumption of cannabis, even in legal states.

## **Private Care Centers Have Their Own Rules**

Similarly, in both countries, home care services are privately owned and home care nurses may be forbidden from dispensing medical cannabis in the home. While federal laws say [nurse practitioners](#) and home care nurses can dispense medical cannabis, there are [restrictions](#) in terms of where, and there may be additional restrictions depending on the policies of individual, privately owned companies.[1]

Overall, however, home care patients have better control over how they medicate. They are allowed to consume cannabis in all forms within their own home (dependent on legalities in their region). This is particularly valuable for [end-of-life care](#). During this transition, patients need good [pain management](#). Another important concern for dying patients is to avoid getting locked into a drugged haze. Many people want to be aware and present with loved ones when the time comes to die.

## Why Choose Home Healthcare?

The best healthcare for older adults needs many considerations. These are some of the [advantages](#) and disadvantages of choosing home healthcare.

### Advantages to Home Care Services

#### Home Healthcare Cost is Lower

In America, the cost of home health services will depend on the patient's provider. In general, however, home care is far more affordable than a lengthy hospital stay or living in a long term care center. In fact, a [2018 study](#) on palliative care indicated that home healthcare can cost an average of fifty two percent less than a hospital stay.[2]

For Canadians, many parts of home care are covered by the Healthcare Act. Things that are not covered are often filled by volunteer organizations or come at a reasonable cost. Personal care, for example, is \$20 to \$30 per hour. It is far cheaper to hire a personal care worker than to live in a long term care home. Additionally, Canadians do not have the option to stay in hospital for long term recovery when those needs can be met with other options.





### **Home Hospital Care Means Lower Secondary Infection Rates and Shorter Recovery**

Hospitals can be dangerous due to exposure to secondary infections, including those from antibiotic resistant bacteria. The World Health Organization estimates that [seven out of one hundred](#) hospital visits will result in a secondary infection. Patients who stay at home are not exposed to these dangers that can be life threatening to frail, older adults.

A [pilot study](#) was recently published in the *Annals of Internal Medicine* (2018).[18] Dr. Levine and a team of investigators at [Brigham and Women's Hospital](#) completed a home care and hospital comparison. They wanted to prove that patients could receive acute level hospital care in their own homes. The results say home care gives a twenty percent decrease in health care costs. Further, home hospital care reduces readmission rates and shortens recovery time.

### **Greater Control Over Care**

Family can be more involved in home care. This keeps the recovery setting intimate and familiar. Overall, family engagement boosts mental wellness for the patient. Additionally, home care medical cannabis patients do not need to worry about not being able to get their medicine.

Home healthcare also allows patients to have increased access to physical activity. This can improve strength and reduce recovery time. It also gives more privacy in toileting and bathing, even while using the help of a personal service worker.



### **Independence and Mental Wellness are Maintained**

When patients have independence of choice and setting, overall mental wellbeing is better. Healing in a place where one has no disruption in access to family, community, or routine is a key element to preventing depression and loneliness. These factors can have significant negative impact on health for older adults in a nursing home or hospital.

A [study](#) published in *Social Psychological and Personality Science* (2013), investigated levels of reported loneliness and the role cannabis may play in helping. The subjects were 5,031 Americans who reported on personal [levels of loneliness](#). They also indicated cannabis consumption levels and feelings of self worth.[7]

Researchers found a correlation between increased loneliness and decreased feelings of low self-worth. They also found that cannabis consumption helped. In fact, the final report states cannabis, "buffered the lonely from both negative self-worth and poor [mental health](#)."

### **Faster Recovery in Home Care**

When one has to stay inside single room or a hospital bed, there can be a decline in physical fitness that impacts healing and overall wellness. A [pilot study](#), [18] published in the *Annals of Internal Medicine* (2020), demonstrated that those who stayed home have better outcomes. This includes a seventy percent lower rate of readmission.

The patient and the home care nurse have a better read on recovery with their one-on-one relationship. There is a consistency of care because the patient only sees one care provider who oversees all aspects of healing.

## **Disadvantages of Home Care Services**

### **Cost to Retrofit the Home**

Retrofitting the house to accommodate medical needs can be very expensive. Patients may need extra railings or a special walk-in bath, for example. Some patients may even need to rent or purchase a hospital-style bed that has the ability to elevate different parts of the body (and includes safety rails).

Private insurance, Medicare, or Medicaid may cover some of the costs for these items, but patients generally have to pay some out-of-pocket.

### **Patients Can Experience Loneliness at Home**

The patient may experience loneliness if there is a lack of family and community connection. This can have significant negative impact on [mental wellbeing](#). As such, one of the benefits of long term care facilities are the organized activities that older adults can participate in. A lack of social activities can lead to mental and physical decline.

In a [study](#) published in *Brain Research Bulletin* (2017), researchers looked at the consequence of loneliness in the rodent model. Mice we subjected to social isolation stress (SIS) to induce loneliness. After only a short period, researchers found that the lonely mice struggled to complete even the most simple tasks. These were tasks that they were preciously able to attend.[8]

As it is unethical to create loneliness in human subjects, patient reports are what is relied upon. These indicate the same, that loneliness quickly leads to depression. This then causes an inability to complete tasks and/or lack of interest in activities that were previously sought.

### **Absence of Emergency Resources**

The patient has access to trained medical personnel while living in a long term care facility. These professionals will be quick to respond and assess the need for emergency services. That doesn't happen in the home setting and therefore it is an increased risk to frail patients.

## **How to Get Home Healthcare**

There are different qualifications that must be met, largely dependent on which region you live within. In Canada, a recommendation from a physician will connect patients to a local home care coordinator. In the United States, one must also have a recommendation from a doctor. Providers will have a list of approved home healthcare options.



In America, there are [specific qualifications](#) that allow the patient to access home healthcare through Medicare or Medicaid. Additionally, Medicare will cover the full cost of home healthcare for sixty days.

For both countries, only certain cases (e.g. those under sixty-five years of age) and services will be fully covered. Private insurance will often cover the gaps. But, your home healthcare coordinator will be able to help with access and navigating the qualifying conditions.

## **What Happens After a Doctor Recommends Home Healthcare?**

First, a home care coordinator will call and gather information about patient needs through an 'intake interview'. The hospital will complete this connection if the patient is being discharged into home care.

Following the call, a home visit will take place. Someone from the home care company will visit the home to assess additional service needs. These include retrofitting the home and occupational therapy.

Then the home care coordinator will connect the patient with all of the required services. These may include a home care nurse, or a dietician, and even a personal service worker.

Finally, services will start and a schedule will be set that works for the patient and his or her family. If the patient is not happy with the care, every company has a reporting procedure. It is the responsibility of the home care coordinator to review that procedure with during the intake interview.



## **Can Everyone Get Home Healthcare?**

For many, the biggest factor in not getting home healthcare is simply the availability of service. In North America, there is [more need](#) for home care than availability.[3] This forces people to either go without care or to use another service, such as a nursing home.

Unfortunately, a lack of home care nursing and personal service workers isn't the only limiting factor. Lack of insurance and ineligibility are the next most-common barriers to home healthcare access.

When people can't access the care of choice, they experience [worse outcomes](#). People who lack home healthcare, and need it, show an increased use of other services. This creates a trickle down effect of burden on the whole system. Alarmingly, this population shows an increased admission into emergency wards and nursing homes. As a result, they lose independence and experience a reduced emotional well being.

## **What is the Cost of Home Healthcare?**

Almost half of home healthcare patients are considered to be older adults (65+). For many, it is an alternative to a nursing home. A small portion of this population will engage for palliative care.

## **Is Home Healthcare Covered in Canada?**

Almost [two-thirds](#) of all Canadian residents have insurance, either privately purchased or through their workplace. For those that qualify, there is also funding through the provincial healthcare plan.

In Canada, there is both public and private funding for home healthcare. Those relying on public access will be able to use an assigned government-contracted agency that is paid for by the government. Alternatively, the patient can engage a home care agency for which they will be given a monthly 'stipend' from the government. This is called 'self-managed' care and it should be noted that not all aspects will be fully covered in this case. Home healthcare is provincially regulated in Canada.

## **What Home Health Care does Medicare Pay For?**

Older adults needing home healthcare service in America are covered under Medicare. Patients pay a portion of the costs through deductibles. Since this is a federal program, it is the same across the United States. Medicaid may fill in some gaps for lower income older adults. Qualifications vary from state to state.

It is important to recognize that direct medical expenses (medication, equipment rental, nursing) are not the only costs for home healthcare. There are other in-home services needed when you are recovering from a health crisis or in palliative care. These include, but are not limited to, babysitting, transportation, meal preparation, and cleaning.

## **Cannabis and Home Healthcare**

The number of older adults trying medical cannabis has [risen a lot](#) in the last few years. In fact, it may be the [fastest growing](#) population to embrace cannabis medicine. Additionally, by 2060, those over sixty five years of age will make up [24% of the Canada's population](#), and for America, [23% of the population](#)! That's a lot of potential cannabis consumers.

But, why are older adults trying cannabis? Most are encouraged by stories from peers or the results of pre-clinical and phase one human trials. Cannabis has helped many older adults reduce, not only the [amount of medication](#) they take, but also the number of prescriptions.

## **Does Cannabis Help Older Adults Stay Healthy?**

Early studies indicate that cannabis may be an important tool for healing in [older adults](#), even making them less frail. Interestingly, a [new study](#) published in the *Journal of the American Geriatric Society* (2019), found that two significant risks for frailty are prescription drugs for pain or sleep.[9] When these are combined, the risk is increased. Studies show cannabis can help manage both insomnia and pain. It is also a suitable medicine for many home healthcare needs.

Further, replacing one or more prescription medications with a naturally occurring substance, such as cannabis, can have a positive effect on the health of older adults. Some of the most promising examples of how cannabis may help are as follows:



## **Cannabis for Sleep Disturbances**

Best known for its intoxicating abilities, research suggests that THC can also [lead to sleepiness](#). It may achieve this by interacting with CB1 and CB2 receptors. Research suggests that [CB1 receptors](#), in particular, have an impact on THC's sleep-inducing potential. One animal [study](#), published in the *International Journal of Molecular Medicine* (2017), showed that [light/dark](#) cycles change the number of CB1 receptors in the body. This suggests that agonists, like THC and the body-made cannabinoid, anandamide, could play a key role in sleep regulation.[10]

## **CBD May Improve Sleep Disorders**

Additionally, [a widely cited](#) *Current Psychiatry* literature review indicates that CBD holds promise as a treatment for sleep disorders, such as REM sleep behavior disorder and excessive daytime sleepiness.[11] But, there is an even greater body of evidence to suggest that CBD has potential to fight other disorders that negatively impact sleep routines. Namely, insomnia caused by [anxiety](#).

One [study](#), published in the *Permanent Journal* (2019), investigated the relationship of CBD and neuropsychiatric disorders. It was found that CBD was able to reduce the anxiety scores of seventy nine percent of patients. Sleep scores also improved in sixty six percent of patients. Finally, it suggested that CBD is able to activate the serotonin



receptor, 5-HT1A. And studies suggest that increased serotonin expression improves sleep onset.[12]

## **Chronic Wound Care at Home**

Chronic wounds can be a source of embarrassment and physical pain for home healthcare patients. Caring for a wound can seem a very intimate act and this is difficult for some. Importantly, wound care makes up for a high percentage of home care protocols.

But, [open wounds](#) that refuse to heal can result in serious [infection](#). These situations drastically increase hospitalization, overall healthcare costs, and can even increase chance of death. Chronic wound problems are more frequent as the population ages and as chronic health conditions, such as diabetes and [obesity](#), become more common.

Research already indicates that cannabis holds potential as an [analgesic](#), [anti-inflammatory](#), and [antibacterial](#) medicine. All of these properties could help in the treatment and healing of chronic wounds. Cannabis also acts as an effective pain management tool.

## **CBD and Treatment of Inflammation in Wounds**

CBD has become a popular option for people who want to reduce pain caused by inflammation. But, what does the science say? Researchers believe that CBD primarily works through receptors called TRPV1 and [GPR55 receptor](#) (or CB3 receptor). Additionally, CBD may also play a role in stopping endogenous cannabinoids (anandamide, for instance) from breaking down. The build up of these endocannabinoids can reduce pain signalling.

Interestingly, [studies](#), including one published in *Therapeutics and Clinical Risk Management* (2008),[13] indicate that CBD is up to twenty times more effective at treating inflammatory pain than NSAIDS. Even more, CBD may be safer as it is not known to increase the risk of stroke, heart attack, or stomach ulcers.

## **Post-op Pain and Infection Management**

It is well known that post-surgical wounds can become easily infected. A 2001 [study](#) discovered that even after clean and sterile surgery, the rate of wound infection is eight percent.[4] This risk increases substantially for elderly patients, with a twenty-five percent infection rate after sterile surgery (for patients above sixty years old). This risk must be carefully managed after being discharged to the home healthcare setting.

## Wound Healing and Cannabis

A [2010 study](#), published in *Forensic Sciences Research*, looked at wound healing mice.[17] Rodents are the model for pre-clinical research as they have many metabolic and receptor similarities to humans. It found that wounds held increased CB1 receptors and this excess peaked at day five following injury, with a return to baseline at fourteen days post-injury. Additionally, the endogenous cannabinoid, anandamide, was also present in high amounts. While it is not yet clear exactly what anandamide and CB1-receptors are doing to increase the rate of healing, it is clear these are involved. Extrapolating data, THC as an analogue for anandamide. This means that, in addition to helping patients deal with post op pain, cannabis may also help speed healing by targeting CB1 receptors at the wound site and backing up the healing work of anandamide. Faster healing means less risk of secondary infection or other complications.

## Addiction Risk of Opioids

As for pain management, a [study](#), published in *JAMA Surgery* (2017), shows that most opioid users become addicted after a minor surgical procedure.[14] Frequently, opioids are the go-to prescription for post op pain management and it may not be appropriate. Cannabis is able to effectively manage most types of pain, especially that of minor surgical procedures.

[Cannabis](#) works with the endocannabinoid system to [reduce inflammation](#), and therefore decrease pain. A [study](#) published in *PLoS One* in 2010, found that opioids may not work as well as we think in reducing pain.[5] In fact, two to ten percent of those who have taken prescription opioids post-op go on to experience chronic pain conditions. Further, cannabis does not lead to overdose and it does not result in increased risk of pain sensitivity.

## The Role of Cannabis in Palliative Care

A study published in the *European Journal of Internal Medicine* (2018), looked at the general effectiveness of cannabis for palliative care. At the time of the conclusion of the [study](#), sixty percent of participants were using cannabis to treat cancer symptoms.[6]

Most patients in the palliative category were using cannabis to alleviate pain. These cancer patients reported their pain to be eight to ten on a scale that ends at ten (being the highest). After six months of cannabis treatment, less than five percent of patients continued to report high levels of pain.

Cannabis treatment for [palliative care](#) seems to be a safe, effective, and well-tolerated option for patients to cope with the malignancy related symptoms. Initially, less than twenty percent of the patients in this group reported they expected a good quality of life. Impressively, after six months of treatment, about seventy percent of patients indicated a significant improvement in quality of life.

Interestingly, thirty-six percent of patients taking the opioids stopped taking these altogether after the six months of treatment with the medical cannabis. It is very probable that the mechanism by which medical cannabis affects the common issues with cancer patients is [very similar](#) to the one by which [opioids](#) affect the same condition.



## Can Cannabis Help Muscle Wasting?

Cachexia (muscle wasting) is a common problem for patients in long term care, whether that be in a home care situation or a facility. This condition is caused by increased [inflammation](#) along with a change in the energy and protein balance in the body.

Pharmaceutical medications that aim to increase weight mass and improve anabolism are the usual treatment for cachexia. Doctors may also prescribe physiotherapy to build muscle and dietary supplements, NSAIDs, beta-2 adrenergic agonists, and corticosteroids. Unfortunately, success rates are slim. When cachexia strikes, patients are often already approaching a terminal phase.

## **CBG may Help Build Muscle Mass**

Science is just learning about how cannabinoid signaling is involved in developing muscle mass. Specifically, research is finding that the down-regulation of [the CB1 receptor](#) affects the growth of skeletal muscle. It's possible that CBD can prevent binding to the CB1 receptor, which is how this cannabinoid may be used to [treat muscle wasting](#) in neurodegenerative disorders like MS.

But, there is also another cannabinoid that may impact muscle development even more, and that's cannabigerol (CBG). We're still learning about this little-known cannabinoid, but what is known so far is that it helps reduce inflammation and could potentially contribute to muscle growth by [encouraging protein synthesis](#).

[A study](#) in the *British Journal of Pharmacology* (2010),[15] found that [CBG](#) can activate  $\alpha$ 2-adrenoceptors, along with blocking CB1. These qualities are what make CBG another candidate as a possible aid in muscle growth and recovery.



## **How Much do Home Care Nurses Know About Medical Cannabis?**

A [survey](#) of Canadian nurses, published in *Cannabis and Cannabinoid Research* (2018),[16] found that serious gaps in education and understanding were evident in the nursing profession. In fact, nearly fifty percent said they felt uncomfortable authorizing a patient to consume medical cannabis through the ACMPR.



This is troubling. Nurses play a vital role in advancing the [safe and effective consumption](#) of cannabis, especially for medicinal purposes. When dealing with an elderly population of home healthcare recipients, who may be less experienced with cannabis and have greater health risks overall, the pivotal role that nurses play can't be over stated.

When nurses aren't sure of the best dosage guidelines, how can they advise new patients or calm fears about taking too much? Individual hospitals or healthcare facilities can get around the lack of nursing regulations by posting their own cannabis guidelines in regard to how, when, and why to use it as treatment. And, overall, there needs to be significant improvement in cannabis education for home care nurses in North America.

## Some Final Notes on Home Healthcare

Seniors want access to cannabis medicine and they want freedom of choice for healthcare. The two are inherently intertwined and need to grow together. The [rise of cannabis nurses groups](#) provides hope that many are planning adequately for the future, but it may not be enough.

The best way to ensure the long-term viability of home healthcare is to make sure it meets patient needs. And this most definitely includes evidence-based cannabis education.



## **Are Home Healthcare Expenses Tax Deductible?**

In Canada, private home healthcare expenses may be tax deductible. A personal care worker hired to help with toileting, dressing, cleaning, transfer and lifting, transportation is considered a tax deductible medical expense under Canadian tax law.

In America, three criteria must be met for the expense to qualify as tax deductible: (1) patient is chronically ill; (2) care is prescribed by a health care professional, such as a doctor or nurse practitioner; (3) the type of care must be approved by the IRS as a [tax deductible](#) medical expense.

## **The Burden of Sickness is More Than Money**

Nearly every sickness has a ripple effect, causing a loss of time or money to the patient or their family. The '[economic burden of illness](#)' is estimated to be in the billions of dollars. This includes direct medical expenses, as well as time off work and lost productivity.

A big portion of this burden is the cost that comes with a decline in mental health for caregivers. Many families that engage home care services optimistically believe that they can fill in many of the gaps of personal care. This can become quickly exhausting and sometimes dangerous. For example, dementia patients may need 24-hour care because they wander off in the night or endanger their lives by leaving burners on the stove. Additionally, lifting and transferring an older adult in recovery from a health

emergency puts them at risk of further harm. The physical and mental strain for family caregivers, plus the hours away from work, make this decision to help (and not hire) one that requires serious thought.

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