

Home Care Services-Growth Of An Industry

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Abstract

The home care services industry has expanded much over the last decade due to factors such as; increase in the number of elderly people across the world, increased costs of healthcare, and technological advancement that sees more elderly people opting to remain in their homes rather than move to assisted living facilities. This shift is revolutionizing healthcare as more and more people require medical, personal and companion care at home. Evolution instead has strengthened the industry knowledge-base and capacity to deliver quality and patient centered care enabled by innovation such as telehealth and remote monitoring. Furthermore, development of trends in government policies and reimbursement structure has helped create markets by encouraging home care as a cheaper way of delivering care than the hospitals or nursing homes. And over time, that demand is expected to reshape and expand the food and beverage industry, from reacting to shifting demographics to adapting to growing pains. Thus, the questions of career growth, staff shortage, legislation limitation, and funding are the main issues to consider for further development.

1.0 Introduction

Acute or Chronic illness may need home care as a recommended treatment or management plan. The findings reveal that home care reduces hospital and nursing home utilization or admission and does not adversely affect client health. Also, ordinary patients will always want to stay in their comfort zone, and to support home care services is supporting that tradition among physicians.

The healthcare term home care is defined as any diagnostic, therapeutic or social support services that is carried on at home. Home Health Agency services include physical, occupational, speech therapy, skilled nursing, social work, and home health aide. It is purposefully more acute than chronic care, and typically ranges from weeks to months in length.

Also included in home care are medical equipment, telemedicine monitoring, portable diagnostically equipment and many others. Technologically intensive services include basic I.V. therapy, multidrug preloaded infusion pumps, hemodialysis and ventilators. The other crucial home-based service is the specialized hospice benefit. Most are delivered by personal care aides and lay caregivers. Payers and regulations vary. As noted home medical care entails a medical practitioner, physician assistance, or a nurse practitioner who delivers acute or chronic care that can be preventive, diagnostic, therapeutic, palliative or rehabilitative in nature.^[1]

Decision made at home has as much risk implications to the patient as decision made in any hospital. Hazards at home can result to additional hospitalization where it is not required at all. Availability of home care leads to reduction in cost, effective results and reduced hospitalization periods. However, difficulties

can be observed even here, pains and aches are present, as any form of exercise is. In 2007, approximate 13 percent of the patient who received home care suffer from adverse event. Of the home care patients, almost all adverse events are medication related where 20%–33% experience a medication problem or adverse drug event. Another study indicates that non-hospital-based personnel such as home care and informal caregivers might be involved in a significant proportion of AE causing hospitalization although the nature of the relationship between the two needs further study. Lack of focus on good communication practices during patient's shift from hospital to home could be one of the reasons for such patterns. ^[2-14]

1.1 scope of home care services

Home care is a care model that provides psychosocial, physiological and medical support services. Home care services are ongoing, coordinated, longitudinal, anticipatory, acute and restorative and interprofessional services provided to the citizens and the families in need.

Home care services contain the following services: ^[15-21]

1. Others are home care and training by expert nurses at home during regular or special period.
2. Supporting services mean services which may assist the individual to mobilize and stay at home. Examples of such substance-based treatments are psychotherapy, physical therapy, foot care, speech as well as occupational therapy.
3. Day/Night care is taken to mean as a service taken to meet the need of the care dependent.
4. Personal care services include such services that are not regarded as nurse-caring (washing, trimming, feeding, etc.). These are administered to cater for the many needs of the dependent person that has a challenge in performing ADLs or is disabled.
5. Home help service is a service which seeks to improve the quality of life of those persons who live in their own homes and require constant supervision and care as well as the many services provided at home. Those services include house cleaning, washing of clothes and ironing them, getting basic drugs, doing any kind of work outside the home and psychological support.
6. The individual is assisted, by the support services, for example to go shopping and to appointments, do social interactions, to visit friends or to pay bills.
7. Chandler relates meals-on-wheels services where cover the delivery of hot meals on permanent or temporary basis to homes of persons who have challenge on preparing or cooking their meals. This service often provides hot meals within the course of the day, that is for breakfast, lunch and supper.
8. Consultancy services include advisory services in regard to the rights and obligations of the individual, and the requirements and grievances.
9. Respite care can be regarded as a temporary care service provision to families that have a disabled or older person. It is designed to be used as an opportunity to have a break from caregiving for other family members. This service is offered by nurses and other professionals in disabled and older person's care.

2.0 History of home care services:

The first voluntary ladies home care services were started in 1813 in South of Carolina by a group of ladies known as the Ladies Benevolent Society. These illiterate women were the initial to supply direct care services in the client's home. This is called the sick poor, went to their homes, accompanied them to pharmacies or stores where they get needed medicines, food, and other necessities such as soap, bed clothing, and blankets, etc. They also assisted in providing them with nurses but these were what, untrained nurses.

As stated by Buhler-Wilkerson (2001), in the North, young women from the green-manor volunteered in associations with the poor sick to foster ‘friendships’ through which the sick could transcend disease and poverty. These women soon discovered that it took professional trained nurses to attend on the sick poor though mere fellowship could not ward off or even treat illness (Buhler-Wilkerson). They first started on the employing of professional nurses whom they referred to as “visiting nurses.” Thanks to such a concept, reference was made to the system called the ‘district nurse’, which was implemented in England (Buhler-Wilkerson).

The National Nursing Association for Providing Trained Nurses for the Sick Poor was developed; in England; in early 1875 (Buhler-Wilkerson, 2001). This organization provided education and developed procedures to those district nurses who practiced their profession in people’s homes. Not only did they feed and clothe the sick poor, these visiting nurses also educated them on how disease is transmitted and how to keep ones home clean to avoid getting sick.

According to Buhler-Wilkerson, by the year 1890, there 21 home care visiting nursing associations. The demand for the provision of nursing care at the home elevated throughout the same period. This need developed into not only treatment of the sick poor but also providing protective measures for babies and children and for expecting and nursing mothers and for isolation cases from communicable diseases such as tuberculosis. Despite the decrease of the death rate of infectious diseases, there was an increasing concern for health promotion and cleanliness. By 1909, Metropolitan Life Insurance Company started mobilizing nurses to go to homes of policy holders to care for their sickness (Buhler-Wilkerson). Their expectation was that offering home nursing care was going to help lower the amount of death benefits being filed. They were one of the first organization to introduce the home care nursing services for which one can be reimbursed^[22]

3.0 Patient safety in home care

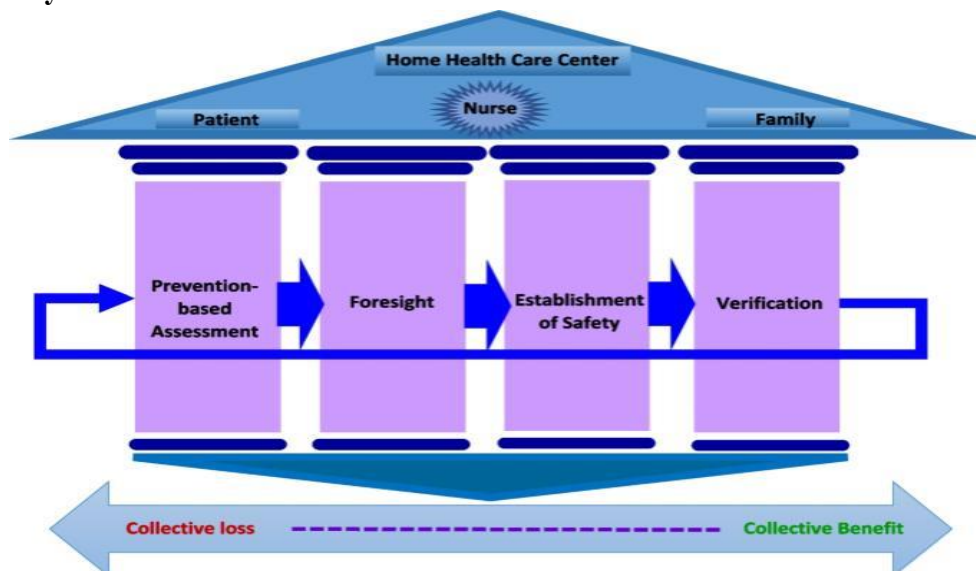


Figure 1: Home Health Care Centre

The need for home care has risen in the world today ^[23, 24]. Home care services cost patients and their families less than hospital costs, especially for patients with chronic illnesses and the elderly. However, the use of home care appears to be a promising approach for these patients’ care. ^[25,26] Iran is no exception in the trend and has designated a great advance in this regard in recent years. ^[27] Another advantage of home care is that patient is more comfortable when it comes to receiving care services. But one crucial

question is here – the home environment is created for living; it is not created for caring. That is why safe patient care is considered to be one of the most crucial significant tasks in home care. ^[29,30]

3.1 Prevention Based Assessment:

The first domain of promotive focus of patient safety for home health care was assessment based on prevention. Upon reaching home the healthcare team attempted to assess the patient's condition, position, medicine, environment, and equipment that focused on a preventive approach to identify important cases and potential risks for safe care.

3.2 Foresight:

It would be seen that; the healthcare team always paid some sort of attention to the future in order to keep a safe model intact. The home foresight strategy was required because home was an organization operating in a very risky and uncertain environment. Foresight strategy measures included predicting problems, organizing, and the provision of predictive facilities.

3.3 Establishment of safety:

Environmental safety Since the home environment is not friendly in as much as it may offer the care, the patients are always at risks. Therefore, adjustments for the changes are probably not probable at all as the home environment is largely small containing mainly apartments. If the home condition was not ideal, the healthcare team reconfigured the space in the home. If not they compensated with the restraint and where possible altered the circumstances as far as the environment would allow. Here there is/was one instance where I visited the patient at home. The patient's bed was placed near the kitchen door; I talked to the family to provide a room in order to move the patient.

3.4 Verification:

It is noteworthy that after having all the above processes implemented, the healthcare team substantiated the above steps by way of assessment and monitoring so as to realize that the safe patient care model was being implemented correctly. Finally, during this stage, the healthcare team reviewed their earlier taken precautionary steps when they were preparing for the implementation phase. They also safeguarded the comprehensive safe care implementation by taking or presenting a report in some functions. For instance, the nurses generated daily nursing reports or documented their documents with precision during higher-level periodic visits. ^[31]

4.0 Types of home care services

4.1 Doctor care:

They can administer treatment and check up on the patient at his or her home; diagnose the illness. He or she may also from time to time assess the home health care requirements.

4.2 Nursing care:

The most popular type of home health care is probably some type of nursing based on their condition. The specific plan of care will be arranged by a registered nurse in cooperation with the doctor. Examples of nursing care might involve enemas, dressings, ostomy, intravenous therapy, administering of medicine, overall health assessment, pain, and other health maintenance.

4.3 Physical, occupational, and/or speech therapy:

Some patients may require assistance may have to be trained on how they can go about their daily activities, or those who have issues with speech after a disease or accident. Muscle and joint use or strengthening can be developed by a physical therapist and formulated a plan of care to address those concerns. An occupational therapist can assist a physically developmentally, socially or emotionally

disable individual to regain the ability to perform basic self care activities like eating, bathing, dressing etc. An SLP can assist a patient who has lost the ability to speak clearly, to get his or her speaking ability back.

4.4 Care from home health aides:

Home health aides can assist with the patient's activities of daily living which include mobility whether from bed to chair, bathing and dressing. A few aides have had some special training to attend to the more complicated tasks under the direction of a registered nurse.

4.5 Pharmaceutical services:

You can also hear prescriptions for medications and medical equipment to be provided at the client's home. Dependent on the required level of patient care they can be taught how to manage medicines, take medication or the use of some of the equipment such as intravenous therapy if necessary.^[32]

4.6 Medical social services:

Medical social workers in doctor home Visit health care can perform tasks like initial assessment of social and emotional needs, counselling, education and support strategies for patients and their families, planning and coordination with other medical practitioners, financial and insurance related assistance and result in liaison with community organization. Medical social services in home health care should help the patients achieve the best health outcomes and improve their lives for individuals receiving home care services.^[33]

4.7 Dementia and Alzheimer's Care:

There exist specific health services for people with dementia or Alzheimer's disease. This type of care is usually service oriented in order to meet the specific needs of those who develop problems with their memory. Hire caregivers in home who are specialized in giving care to the people with dementia and they adapt such measures that are useful in the way we communicate with the person, how to address changed behaviors and how to secure the environment.

4.8 Companion Care:

That is the reason why many of them focus on the necessity of receiving company and social attention as much as the specialized care. Companion care is when some individuals have personal company through a carer, who might do light household chores, shopping, or doctor's appointments, and participate in leisure activities. This fellowship can play a major role within eradicating loneliness and depression which are some of the factors that come along old age and isolation.

4.9 Respite Care:

Respite care means the main caregiver gets a break, much needed most of the time. Temporary solutions can be provided to families in order to give them a breather as well as give their relatives the continued care and comfort they need in the privacy of their own homes. This type of care can be short-term, meaning a few hours or it may take a long time, some few weeks.

4.10 Meal Preparation and Nutrition Support:

The other important service category is meal preparation/ nutrition assistance. Carers can help cook meals meant to address the needs and preferences of the cared for individual and enable them to eat right while dealing with conditions like diabetes or heart problems.

4.11 Palliative and Hospice Care:

Palliative and hospice programs concentrate on the patient comfort in their final stage of a terminal ailment. It is to reduce the unbearable symptoms of pain and other related discomforts coupled with the supportive measures at the psychological and spiritual levels. This type of care also supports families,

giving them strength to deal with psychological burden connected with the problems of terminal diseases.^[34]

5.0 Growing Demand for Home Care Services

The current scenario of healthcare delivery is rapidly evolving and the focus lies more and more on home care. This shift is not new but has definitely been amplified by several triggers such as the current global pandemic and changing patient needs. This is the third blog post in our several parts series on how COVID-19 affected almost all the sectors of the healthcare sector.

There is estimate that pre pandemic figures reported 5 million people receiving home base care in 2019. However, the spread of coronavirus and it's patients' unwillingness to be in public places this figure sharply increased because 11% of former COVID-19 hospital patients required home care. Such a shift was arguably caused, or at least accelerated by lockdowns, by social distancing, as well as by individuals not as many of whom are willing to visit their doctor at the office, presumably out of fear of catching the virus, thus new populations across the health spectrum and across age groups were introduced to at-home care.^[35]

Like telehealth at-home care was on the rise even before the pandemic hit. Older people, and those with disability or other ongoing medical conditions, described care at home as more comfortable, convenient and responsive than being in a care home or nursing home environment.

5.1 Home Care Industry Trends

There are numerous trends and factors which influence the development of the home care market. Thus, the given society's healthcare preference is also changing in response to the growing needs of the people. Now let me discuss two out of the many ways in which this growth occurred.

5.2 Home care Industry – 7% Annual Growth Rate

The home care industry is presently acknowledged as one of the most rapidly developing industries, with an annual growth rate of 7%.

1. The home care market was \$100.4 Billion in the year 2020.
2. Market is estimated to reach \$225.6 billion by the year 2027, the compound annual growth rate of this industry is 11%

The following are some reasons home cares has also grown to become a large industry COVID 19: A mid the epidemic, more individuals have demanded care from their homes to avoid direct exposure to the virus.

5.3 Demographic Trends:

Home care patients, therefore, have an average age of 2 years below or above 65 years at 70 percent.

1. Among home care patients, 70% are 65 years and older.
2. About 1/3 of the home care receivers are below 60 years as they require assistance in home care needs.

5.4 Consequence of Covid 19 In Home Care

Since the pandemic started, the use of home healthcare services has been on the rise throughout the world. People want home care because they do not want to go to the hospital where they can be infected by the virus.

A comparison of the number of telemedicine consultations in March 2020 and the same period in 2019 showed a 154% increase in demand for remote care services.

Importance of Home Care in Addressing Mental Health Concerns: One in four seniors are struggling with mental illness.

Old people obviously lonely and often fall pre-victim to lonely depressed feelings. The home care services

presented here can assist such citizens to have a better quality of life. It is important to note that: These disorders affect a third of adult persons, if they are 65 or older, which particularly includes anxiety and depression.

5.5 Scientific Causes of Mental Illness In Elderly People

Several factors contribute to mental illness in seniors, including:

1. The psychological factors include change of brain chemistry and restructuring.
2. Socio demographic variables like lack of companionship, loneliness and loss of social connections.
3. Psychological characteristics – loss, trauma, stress.

5.6 Treatment and Support for Seniors with Mental Health Needs

Home care services can provide several options for the treatment and support for seniors with mental health conditions, including:

1. Private practice Counseling and therapy.
2. Medications for the aforementioned ailments including depression and anxiety.
3. People are advised to use support groups and community services to help them find companionship and support emotions.^[36]

6.0 New Technologies in Home Care Services.

6.1 Smart Home Monitoring Systems:

As people get older, more often they have health issues requiring either emergency or unscheduled care or access to specialized clinic care. For extended duration of healthcare service, some elderly require to live in long term care centers, and these are costly due to restricted admission. However, the continuative evolution towards the lot technology can have a great role for the development of elderly healthcare systems.

In a smart home, all the basic physiological parameters of the elderly can be measured and remotely monitored independently using low-cost sensors from an outsourced remote healthcare service center through an encrypted communication channel to provide an end-to-end low-cost long-term healthcare solution. This will also help the elderly to remain in their homes comfortably, safely and securely as they age- a perfect example of how a smart home solution can be used for elderly people.^[37]

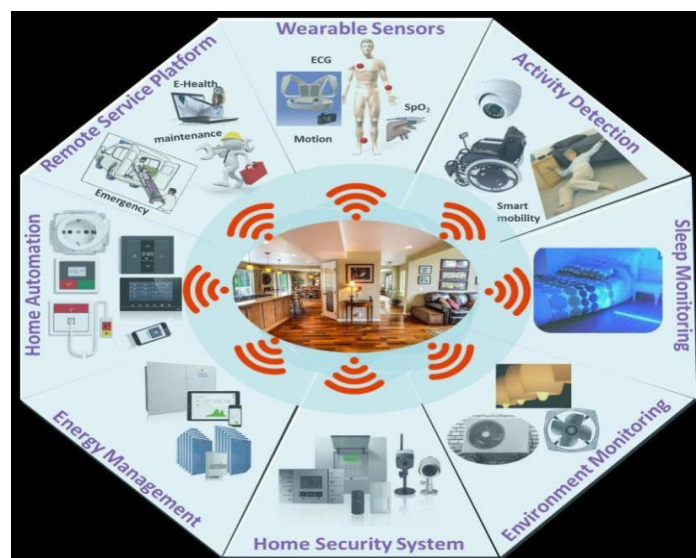


Figure 2: Smart Home Monitoring Systems

6.2 Wearable Technology and Remote Monitoring Systems to The Patients:

The progress of wearable and the remote monitoring gadget is rocketing. These platforms will offer better assessments and quantification of physical health status and physiological characteristics in less intrusive ways and will soon impact various aspects of prevention, diagnosis and disease management including activity and food intake behavior, stress level, water intake, early detection, drug dose and reminder etc.

Namely, research is being conducted at present in developing the new generation wearable sensors for cancer-associated chemical or biomarkers. For instance, wearable bandage and microneedle electrochemical sensing platforms have been designed for the detection of the biomarker tyrosinase enzyme of skin on both skin surface and skin moles with regard to early melanoma screening; [38,39]



Figure 3: Remote Patient Monitoring Devices

6.3 Robotics:

Applications involve robotic systems designed with elements of artificial intelligence integrated, though some are anthropomorphic in design; they were initially employed clinically, and for the most part, piloted (e.g. robotic surgical procedures such as robotic assisted laparoscopic pyeloplasty, cystectomy and so on). But the advancement of technological posts have taken the robotic application to home in tackling of cognitive, functional as well as psychological complications. The Robot suite developed by Johnson and colleagues (2007) consists of the robotic application with a regular force feedback joystick and platform with a steering wheel and software for motivation and assessment for the stroke rehabilitation home care.[40]

The Nurse Bot project spearheaded by the University of Pittsburgh and Carnegie Mellon University under Montebello et al (2002) provides a robot providing intelligent reminding of for example, when to take medication or an upcoming appointment, telepresence or when a provider needs to have a word with the patient through a screen, surveillance- emergencies which may occur at home and require a strong hand from a robot, mobile manipulation in this is a combination of robotic strength.[41]

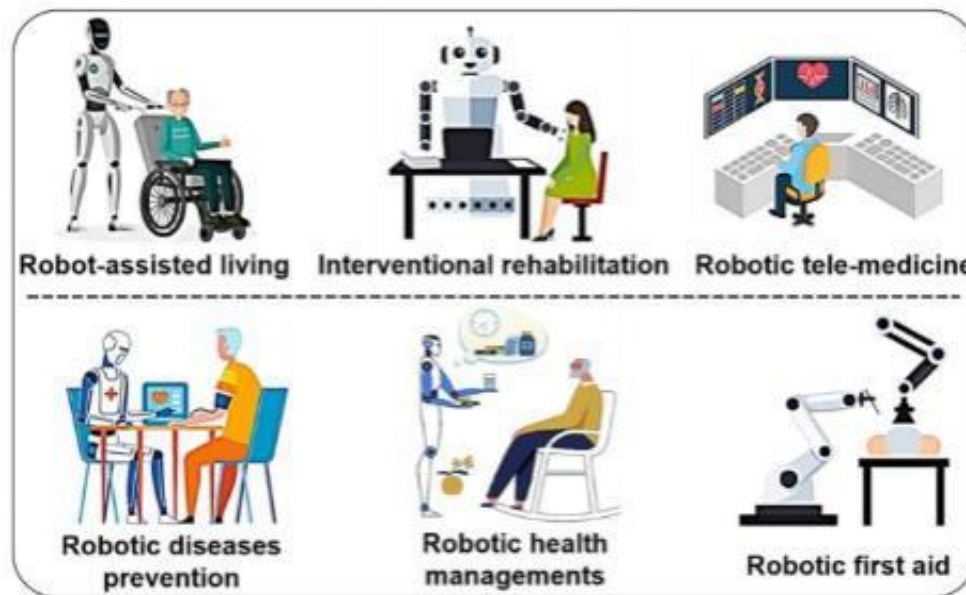


Figure 4:Robotics in Home Health Care System

6.4 Telehealth:

Telehealth applications remain a good setting in providing disease management to patients given home care with chronic ailments and their families. This section is segregated according to the disease or condition that is focused on by the application^[42]

An example of Internet use in asthma is the home asthma telemonitoring system used in Finkelstein, O'Connor, and Friedmann (2001); it gives patients continuous help in the everyday activities on handling their asthma, and also assists in coping and warns health care providers if there is some identification for specific conditions/patterns of use. The system is run and completed by the patient or any informal carer (friends or relatives) use online questionnaires and using spirometry to test lung volumes. These data sets, that are spirometry readings included, are then sent to health care providers.^[43]

The participants noted additional difficulties which were related to the life of oncology patients, such as disease management and management of side-effects of the treatment at home. For seven common symptoms the Common Terminology Criteria for Adverse Events schema of the National Cancer Institute was translated into a web-based patient reporting system. where cancer patient could self-report from desktops at the outpatient clinics and from home computers (Basch et al., 2005). In this study, 80 patients with gynecological malignancies, who were preparing to start standard chemotherapy regimens, were recruited to the study and were given instructions to use a computer terminal at their next clinic visit to go online and report their symptoms or to access the system from home if possible. Many toaster-level toxicities (grade 3 to grade 4) which occurred at home required treatment by clinicians. Thus, patients are able to recount symptoms observed during chemotherapy, and their report leads to clinical action and modifications in the patient management — indicating that the use of Internet is quite helpful in the treatment and monitoring of home-based cancer patients [Basch et al., 2005].^[44]

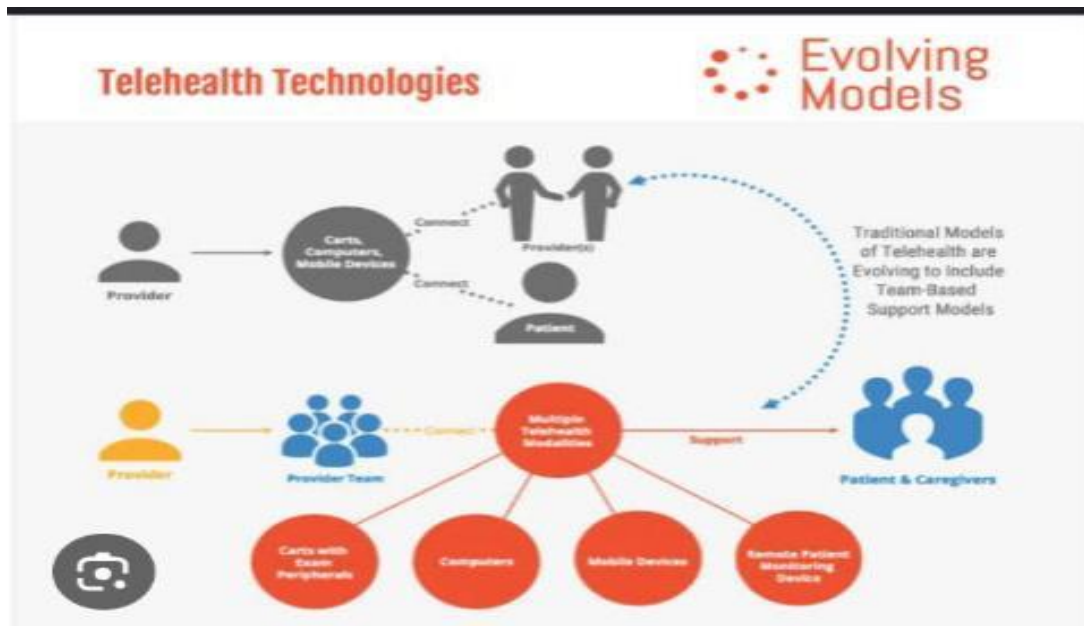


Figure 5: Telehealth Technologies

7. Benefits of Home Care Services

7.1 Happier Stress-Free Life:

The first thing that makes home health care a feasible option for many families is the resulting happier and less stressed-out life of the person receiving care and/or the whole family performing caregiving duties. The home health care aides can help with showering, dressing, and other activities; this way, and lifting most of the burden off the families, while allowing the patients to remain in their homes for as long as is physically possible. The home health care team could also assist the family in offering initial instructions on how to offer follow care and availing means to get full information. That support helps to achieve certain level of stability and prevents from caregiver's exhaustion.

7.2 Wide Range of Services:

That is why home health care services include a broad spectrum of care, so they can address most of the health issues of your family members.

Services can include:

1. Medication Management
2. Assessment
3. Maintenance
4. Wound Cares
5. Diabetic Management
6. Physical Therapy
7. COVID Restrengthening
8. Recovery After Surgery
9. Launch home-based Therapy Services
10. Occupational Therapy
11. Bathing/hygiene Assistance
12. Laundry
13. Housekeeping

14. Grocery Shopping

15. Getting A Break [seeing to the need to help caregivers have time off and not be confined to the house].
[45]

7.3 Saves Money:

Saying no to going to the hospital too often is economical. Home health care also has the advantage of avoiding the need for nursing home care, or more specialized care in the future. Home health care cost is also filtered by Medicare and Medicare advantage payors and private insurance for eligible. [46]

7.4 Higher Level of Care:

Private care services are performed by qualified individuals including home health care attendant, nurse, therapists or home health aides. This is because hiring a professional ensures that the right decisions are made regarding the welfare of your loved one and it is for this reason that your loved one will be denied anything less than the best.

7.5 Peace of Mind for Families:

It is not doubt that home healthcare can help give a family the comfort of knowing that their family members are being cared for by the best of the best. Besides, home healthcare can also assist to minimize the stress anxiety involved in lifting a loved one.[47]

7.6 Tailored Care Plans:

Despite the fact that there are quite a number of benefits associated with personalized home healthcare, some of the chief ones include: Each individual being a senior requires different care, treatment, and specific amenities. Individual care plan are implemented from the comprehensive initial assessment of each patient making sure that the patient receives that form of care he/she needs. This can involve drug prescription, nutritional advice, exercise regimen and others, all of these specific to the elderly. [48]

7.7 Security and Comfort:

Research also shows that there are lesser problems with people who are healing at home than those who are healing at a hospital. Patients may benefit from home health care services by also getting help in the organization of their prescriptions. You can be saved from having to seek hospitalization due to having had a dangerous combination of drugs. An occupational therapist can help to design the living space so that the risk of falling could be minimized. It is important for elderly people because they can stay at home and do not experience extreme disruption of the daily routine thus, they feel somewhat normal.

7.8 Excellent Quality:

Another is that home health care involves treatment by standard procedures and standard treatment requirements that have a basis on research and development that would allow patients to receive the right treatment in the comfort of their homes and neighborhood.

7.9 Team of Experts:

The home health care team includes nurses, physical therapist, occupational therapist, speech therapist social workers and home health aides who are all supervised by a doctor. All of them have been vetted and trained, to ascertain that none of the team members has not been associated with such wrong doings. These specialists can be accessed by patients and they do not require to see a doctor, physical therapist or a physician to seek for treatment.[49]

8.0 Challenges for Home Care Services

8.1 Deficiency in intra- and extra-organizational communications challenges:

1. Lack of relationship between nursing schools and home care centers [50]

2. Absence of registration and identification procedures applied to home care licensed service providers and nurses employed in such centers to oversee their operations. ^[51,52]
3. Impaired and interrupted collaboration between a medical team, caregivers, and patients.
4. Poor interaction between the private and the public sector. ^[54]
5. Lack of efficient communication between administrators of home care centers, home care nursing service providers, the police and the municipality. ^[55,56]
6. Lack of co-ordination, collaboration and effective communication among the total staff comprising nurses, social workers, physiotherapists occupational therapists, speech therapists, home health aides, and others officials involved in the home care of a patient. ^[57-60]
7. Lack of planning for as well as the system which entails an admission of a patient from hospital to home care centers and vice versa. ^[61,62]
8. Lack of flow of information between hospitals and home care providing centers. ^[63]
9. Unsuitable Inter professional communication, for example, inadequate contact to specialists in various areas of health and home care, and poor coordination between clinical care delivery and administrative paperwork. ^[64,65].
10. Ignorance of and, therefore, no use of the capacity of other organizations including marketing agencies, medical equipment providers, etc. to enhance home care services. ^[66]
11. Lack of well-coordinated teams with a powerful nursing management to look at the ways of care promotion based on the results of needs assessment, based on the reports on care services which have been received by home care centers so far ^[67,68]

8.2 Information poverty challenges:

1. Lack of information or knowledge of the existence and the working of home care providing centers in the general public.
2. Knowledge of inadequate health information systems. ^[69]
3. Prescribing inapposite advertisement for home care providing centers. ^[70]
4. The imperceptive or rather, the inadequate understanding of nursing services by society and the presence of an improper attitude to nursing services.
5. Hypothesis of population and thus, the attitude of beneficiaries such as policymakers, specialists, caregivers and caretakers towards the opportunities provided by the technological services for home care. ^[71,72]
6. Lack of Acute care medical records and the treatment provided to the patient at home. ^[73]

8.3 The Challenge of Monitoring the Performance of Home Care Centers:

Other difficulties of home care from the view of the nurses were the difficulties regarding the observation of the services' provision. As reported by the participants, sustaining the quality and stated standards of care is imperative to achieving improved quality. Further, the participant highlighted on the issue of more monitoring and validation. They thought that being able to achieve the objectives of giving the best home care services depend on the analysis of the given service They said that due to nonprofessional personnel, provision of services by unauthorized center and service companies and not recruiting experts, it impacted on quality-of-service provision and the inspectors of the deputy of treatment should prevent moral and legal violations through periodical visit to home care centers. ^[74]

They also felt that the monitoring team could talk to a family who received nursing services and assess the degree of their satisfaction with the offered services via telephone. The participants also noted that most of the home care centers performed by the professionals did not hire trained personnel leading to

poor services, and increased patient risks^[75] Therefore, the authorized centers should have more observing of the care provision by home care centers. On the other hand, some centers charge patients sometimes not by the approved tariffs thus a customer dissatisfaction with the services offered^[76]

8.4 Insurance-Related Challenges:

The participants also note that economic factors is one of the challenges facing providers of home care services. Since most of the homes have notified high tariffs and also no insurance reimbursements, most people cannot be able to afford home care. An insurance must cover those services so that people can use those services in their needful times. Gaining the supports of insurance, Red Crescent, welfare, and other international organizations, calling for people's and NGOs participation in all possible way to obtain all sorts of support, would achieve better the acceptance of home care services.

8.5 Medical Device Training Challenges:

Human factors interventions may be most useful for explanation and verification about the utilization of the medical devices to be applied in the care of chronic illnesses both by the healthcare workers, and the patients. Prior human factors studies have established that both novice and expert users need training, even if a specific medical device in question is ease-of-use type, for instance^[78] In addition, using home-based intervention, training on personal care devices can enhance patient's higher functioning, rate of using the device and satisfaction level, and necessary capacity that would have been required for using that certain device^[79]

One of the ways that were outlined in the previous literature for decreasing usage difficulties and errors is training. Nevertheless, all types of training are not the same especially for the elderly clients who may strictly respond to quality training. For example, when learning to use a blood glucose meter older adults were more accurate after having video training based on instructional principles than after reading written instructions or watching a manufacturer's video. The results also indicate that the performance of younger adults was less impacted by the type of instruction provided. Hence, the authors concluded that there is a necessity of training in specific programs for older persons to avoid mistakes during technology application in conditions of medical devices in house environments^[80]

8.6 Medication Management Challenges:

Medication There are a lot of medications available today that make one of the significant aspects to be healthy a priority for many individuals today. Medications exist that are effective in treating the most common age-related health conditions: hypertension and hyperlipidemia, diabetes mellitus, cardiovascular diseases, malignancy, and cerebrovascular accident. Consequently, medication management is recognized as a central component of the care of older persons. Of all the patients 65 years and above, 83% are currently using at least one medication, and 46% are using three or more medications. ^[81]Task of addressing different medications most of which have different timings as well as side effects turns to be a complex one especially given the fact that any mistake results into life threatening oneness. Indeed, adverse drug-related issues contribute to approximately 5% of all hospitalizations, and most of them are potentially preventable^[82]

9.0 Regulations for Home Care Services

The combination of aging and living in an Institution may affect the persons' self-determination, particularly, if they have not been exposed to life In Institutions before. This Issue was discussed and there was acknowledgement that It could be 'relational autonomy' with reference to the care home policies^[83] The nature of assertive care boundary Violation Where It's boundary Violation to deprive someone of their

Rights may cause stress and conflict between residents and the staff Where policies are not in place. This brings a worry of Biopsychosocial needs of the elderly Not Being met In sometime By failure, neglect, or malice of certain residential care Facilities.^[84] These include: care Providers, family members, residents, advocacy groups and organizations, and the State Health Authorities and Departments of Social Justice. Independent regulators have been advocated for for controlling older adults living in residential care facilities. Moreover, regulation entails, laws, Rules and minimum standards for such Facilities. Alas, such a frame work indeed does not exist in India as yet^[85]

There are also examples concerning Settings with high level of development that reveal over-regulation as the main issue. In the Ontario Nursing Homes Study the following was The Scrutinizing objective aiming at enhancing quality of care Though the regulations and accountability unfortunately has escalated workload and paperwork. This meant shorter time to give direct physical care and equally, the opportunity to critically assess top management issues like funding and staffing levels was lost^[86].

This means that form of licensing or regulations will Come with minimum norms to provide Care that can only be scrutinized by Examining the documentation in the Resident records. Audits are likely to pick Up deficiencies and therefore will further increase the work load. There should be More funds invested in Records administration, and pay attention to these lacks of regulations They are not designed to perform The Essential function while Creating Regulatory policies. A study report from Quebec province after regulation revealed that some of the smaller care homes were shut; but, the care in private care homes enhanced^[87]

Primary research was also conducted by Tata Trusts to understand the current reality of old age Homes in India covering 480+ old age homes and 60+ senior living projects in 84 cities, towns and districts of India. According to the report, It was observed that prospective clients had high expectations of services that elder care facilities had to offer but these services were rarely delivered, no evaluation of the quality and suitability of services meant that elderly inmates were exposed and could not incentivize the owners and managers of the facility to provide better services^[88]

10.0 Current Trends for home care services

There are still documented shortages of caregiver supply, and there exists increasing home care demand. The home care industry has been notorious for its low wages historically, the burnout offered care providers experience, and an aging generation of baby boomers make it difficult for agency owners to find adequate staff.

10.1 Tech Will Ease Rising Caregiver Demands:

Everyone seems to agree that we will not find a cure to outsource caregiving needs, while apps, digital tools, and artificial intelligence will make the heavy lifting much easier on the caregivers. According to Mark H. Friedman of Senior Helpers Boston and South Shore, technology could serve as caregiver assistance in ways like monitoring, documenting vitals, providing medication cues and noting anything out of the ordinary. Since technology may reduce the amount of work that has to be done by the caregivers, care agencies may well be capable to admit new clients as they look for more caregivers to join the team.

10.2 Agencies Will Promote Training for Caregivers:

Various trends and literature and real-life stories have also depicted that enhanced training and management booster help in increasing the caregiver turnover ratio. Promising employees with good caregiver training and the chance to develop their professional skills can make agencies' recruitment

process easier. More agencies providing caregivers with free on demand videos that can be accessed for the required training with newly joined caregivers, and training programs related to particular careers.^[89]

10.3 AI-powered Personalized Care:

Home care is basically centered on a mountain of mundane tasks that interferes with the concentration of assistant or care givers. Consequently, there is a rising demand for the AI personalized solutions such as the chatbots, analytics, and NLP. AI health assistants are available to offer recommendations and support in real-time, while chatbots allow users to receive information and sort their concerns always-on. Additionally, the implementation of predictive analysis for the identification of health decline and NLP models for making better use of Patients' data. They allow quick reaction and are based on objective values. In this way, the concept is wider and includes lower healthcare expenses and higher effectiveness of operations among caregivers and other health care workers.

10.4 At-home Medication Systems

If one has to take several drugs simultaneously, remembering simple facts like the medications' interactions, side effects, and dosage schedule is not easy. Smart medication boxes as well as new pill dispensers enhance home care through offering full range of services in medication management. They guarantee that patients receive correct drugs, the proper doses and at the correct times eliminating likelihood of mistakes. Such systems have benefits derived from delivery systems like reminder alerts, personalized dosing schedules and compliance improvements as opposed to traditional methods. From the perspective of money and organization, home medicine regimens decrease the probability of taking the wrong or duplicate doses which could lead to expensive readmissions or adverse effects. As such, these systems enhance medicine management to patient benefit and overall health care organization within the home care environment^[90]

11.0 Future Trends for Home Care Services

The executive summary of key characteristics developed by home health agencies and the workforce requirements needed to attain the four pillars are as follows. Home health agencies of the future must provide care that is:

11.1 Patient and person center: It describes patient-centered care as “delivering care that is culturally competent and responsive and that respects patient's preferences, needs, and values, as well as ensuring that patient values are integrated into the clinical process.” And regards it as one of the six domains of excellent patient care. ^[91] Since home health, by its concept, takes place in a patient's home it defines the best opportunity to assess and meet the needs of a particular beneficiary and his or her family. This more personal connection was characterized by another participant in the workshop on home health as one that is more around the kitchen table where decisions about all thing's health care are really made and controlled. As the home health industry starts managing patients in more expansive terms the home health industry requires an understanding of what represents persons centered home health care and how it is defined and delineated.

11.2 Seamlessly connected and coordinated: This defines the home health agency of the future as a linked home-based care and part of a connected system of primary and facility-based care. Several of the mentioned stakeholders pointed at the place that home health could possibly fill when it comes to delivering proper care for beneficiaries. Because health care is shifting to payment for outcomes, not the number of procedures provided, home health agencies are responsible for planning and oversight of patient care and proper discharge from other zip-coded settings. Beneficiaries engage with many health care

providers, professionals, services, supports, and suppliers during this movement, thus; home health agencies should have resources intended to address the interrelatedness and complexity of care and services in the transition home. It is inevitable that in the future all home health agencies will possess these attributes; however, the home health agency care coordination may go a step further than merely coordinating care after an acute episode. Home health is poised to address medical care with nonmedical ones ... such as social support like food delivery and other services like Nurse visit. The shift of many services into the home environment makes home health agencies a logical partner for entities assuming risk under APMs, although such entities would need to develop new capacities for managing care not only after an acute event, but over the entire care cycle.

11.3 High quality: Home health agencies must therefore be in a position of being able to guarantee them of the best care all the time. Providers who participate in Medicare home health already care for a fragile demographic. Among Medicare home health services consumers compared to non consumers, most of them are more likely to be major than 85 years, they are likely to be single, with many chronic conditions and restrictions, and these consumers have low income compared to the rest of non-consumers.^[92] Home health care is and will remain an important element in ensuring the receipt of beneficial skilled nursing and therapy services for these beneficiaries and in helping the patient stay safely at home instead of expensive institutionalizations. Thus, as presently redressed, home health agencies are required to be able to care dependably for a spectrum of patients, yet some interviews with innovative home health agencies suggested the growing need for highly specific care of clinical conditions including congestive heart failure or major joint replacement as necessitated by under condition-specific bundled payment regimes. In other situations, gerontological knowledge could be important assets as well as expertise in the palliative care. As the home health industry adjusts its business model to its new value-based care environment, Competency Hall identifies that the industry must regularly adapt to changes in patient populations and always deliver consistently dependable, efficient, and high-quality care to enable patients to get home and stay home as safely and quickly as possible.

11.4 Technology enabled: Last but not the least, technology is also transforming the manner health care is delivered in this nation. They New Settings It permits patients avail intense service from health care experts and conduct an easier relationship with them. That can be a positive impact in that it may help certain patients to gain better access to care, but it also will fundamentally alter how care is provided and how chronic illness is managed. Avalere Health's interviews of innovative organizations for this study found many have adopted the technology, such as remote monitoring for patient care, but Medicare has a general policy of not paying for this technology. It is also made significant claims that connecting health IT can help care consumers, organizations, and patients to gain better care coordination, care quality, and care efficiency; however, home health agencies were not able to access to meaningful use incentive payments to adopt electronic health records. Consequently, based on such requirements, it is possible that home health agencies have stepped into another "paradox of excellence" in the foreseeable future, to implement new technology where no such reimbursement is offered.

Emerging Three Roles for Home Health Agency of the Future

With these "four pillars" of characteristics in mind, and within the emerging value-based payment world, the home health agency of the future should serve three critical roles:

1. Post-acute care and acute care support: Home health agencies should be viewed as stakeholders that help patients discharge planning and help them receive quality home care. As clinically appropriate for the patient, home health agencies could be as post hospitalization or as post emergency department

facilities for intensive nursing and other rehabilitative activities and coordinate with therapies and other related services.

2. Primary care partners: Home health agencies should be aligned with longitudinal, outpatient primary care medical homes and home-based primary care longitudinally; provided timely, episodic skilled nursing, care coordination, therapy, and other related services for those who need a higher level of home-based services to prevent hospitalization or other poor outcomes during a limited time frame. Skilled home health agencies should also offer minimal maintenance of skilled nursing services to continue to support patients' primary healthcare in their homes (for example, catheter care, ostomy, and so forth, as part of efforts directed at keeping patients well while at home).
3. Home-based long-term care partners: Home health agencies should be affiliate with home based long-term care and social support models (i.e., formal and informal personal care providers) for compliant skilled nursing, therapy, and corresponding services when care receivers require brief boost of home care before a hospitalization or institutionalization. At other times, home health agencies should offer infrequent continuing professional nursing care which requires ongoing long-term care at home (e.g., insertion of catheters, care of stomas, etc.).

Also due to greater government and health plan emphasis on cost containment, the home health agency of the future has new payment incentives in high risk, shared savings contracts for performing these roles competently and cost effectively. Consequently, the home health agency of the future enjoys a more structural and formal relationship as the owners, partners or affiliate of other entities that deliver a more comprehensive showcasing of services that incorporate home health agency care and other home-based services.

12.0 Conclusion:

There is a significant growth in the home care services industry to cater for the increasing population of the elderly, growing incidences of chronic illnesses and shifting culture that encourages senior citizens to prefer home care. Increased use of technology, including telemedicine and home monitoring is making home care more viable, and also the growing support from the healthcare organizations and governments that see home care as a less expensive model than institutional. This expansion is informed by increasing utilization of specialized services by consumers such as palliative and dementia care services. Therefore, it grows to cater to the needs of patients in receiving quality services in the comfort of their homes to help constitute the healthcare fraternity.

Reference:

1. Sharon A. Levine, MD; Jeremy Bolam; Peter A. Boling, JAMA. 2003;290(9):1203-1207. Doi: 10.1001/jama.290.9.1203.[https://jamanetwork.com/journals/Jama/full article/197192](https://jamanetwork.com/journals/Jama/full%20article/197192)
2. Coleman EA. Falling through the cracks: challenges and opportunities for improving transitional care for persons with continuous complex care needs. *Journal of the American Geriatrics Society*. 2003; 51:549–55. [PubMed] [Google Scholar]
3. Manolin NL, Brenner PS. The impact of a burn wound education program and implementation of a clinical pathway on patient outcomes. *The Journal of burn care & rehabilitation*. 21:440–5. Discussion 439. [PubMed] [Google Scholar]
4. Leff B, Burton L, Mader SL, et al. Comparison of functional outcomes associated with hospital at home care and traditional acute hospital care. *Journal of the American Geriatrics Society*. 2009;

- 57:273–8. [PubMed] [Google Scholar]
5. Hughes SL, Ulasevich A, Weaver FM, et al. Impact of home care on hospital days: a meta-analysis. *Health services research*. 1997; 32:415–32. [PMC free article] [PubMed] [Google Scholar]
 6. Elkan R, Kendrick D, Dewey M, et al. Effectiveness of home-based support for older people: systematic review and meta-analysis. *BMJ (Clinical research)* 2001; 323:719–25. [PMC free article] [PubMed] [Google Scholar]
 7. Counsell SR, Callahan CM, Clark DO, et al. Geriatric care management for low-income seniors: a randomized controlled trial. *JAMA: the journal of the American Medical Association*. 2007; 298:2623–33. [PubMed] [Google Scholar]
 8. Beales JL, Ede's T. Veteran's Affairs Home-Based Primary Care. *Clinics in geriatric medicine*. 2009; 25:149–54. Veii–ix. [PubMed] [Google Scholar]
 9. Barrett DL, Secic M, Borowski D. The Gatekeeper Program: proactive identification and case management of at-risk older adults prevents nursing home placement, saving healthcare dollars program evaluation. *Home healthcare nurse*. 2010; 28:191–7. [PubMed] [Google Scholar]
 10. Madigan EA. A description of adverse events in home healthcare. *Home healthcare nurse*. 2007; 25:191–7. [PubMed] [Google Scholar]
 11. Sears N, Baker GR, Barnsley J, et al. The incidence of adverse events among home care patients. *International journal for quality in health care: journal of the International Society for Quality in Health Care / ISQUA*. 2013; 25:16–28. [PubMed] [Google Scholar]
 12. Gray SL, Mahoney JE, Blough DK. Adverse drug events in elderly patients receiving home health services following hospital discharge. *The Annals of pharmacotherapy*. 1999; 33:1147–53. [PubMed] [Google Scholar]
 13. Meredith S, Feldman PH, Frey D, et al. Possible medication errors in home healthcare patients. *Journal of the American Geriatrics Society*. 2001; 49:719–24. [PubMed] [Google Scholar]
 14. Johnson KG. Adverse events among Winnipeg Home Care clients. *Healthcare quarterly (Toronto, Ont)* 2006;9(Spec No):127–34. [PubMed] [Google Scholar]
 15. Küçükgüçlü Ö. Home care, In: Dilek Aslan, Murat M. Başar (Eds). 4th National Older Health Conference Geriatric Nursing Course Speech Texts. Turkish Geriatrics Society, Ankara 2010, pp 100-2 (in Turkish).
 16. Erdil F. Aging population and home care, In: Murat M. Başar, Dilek Aslan (Eds). *Geriatrics and Gerontology II*. Rekmay Limited, Ankara 2009, pp 329-41(in Turkish).
 17. Yılmaz M, Osmanoğlu F, Akmeşe G, Tak A, Yağbasan B, Gökçay S, Sağlam M, DoğanYılmaz D, Erdem S. In-home health services as an alternative form of presentation of patient care. *İstanbul Medical Journal* 2010;11(3):125-32 (in Turkish).
 18. Karahan A, Güven S. Home care for elderly. *Turkish Journal of Geriatrics* 2002;5(4):155- 9 (in Turkish).
 19. Çelik SS. Nursing services at home care of the elderly person. *Journal of Health and Society* 2008;18(1):21-4 (in Turkish).
 20. Oğlak S. Long-term home care services and care insurance. *Turkish Journal of Geriatrics* 2007;10(2):100-8 (in Turkish)
 21. Danis MZ. Community based care understanding and social services: A care model proposal from Turkey. *Turkish Journal of Geriatrics* 2008; 11(2):94-105 (in Turkish)

22. Erin O'Hara-Leslie, Amdra C. Wade, Kimberly B. McLain, Leslie and Wade%29/01%3A_What_Is_Home_Health_Care/1.02%3A_History_of_Home_Care. https://med.libretexts.org/Bookshelves/Allied_Health/Foundations_for_Assisting_in_Home_Care_%28McLain_O%27Hara
23. Weerahandi H, Bao H, Herrin J, Dharmarajan K, Ross JS, Jones S, et al. home health care skilled nursing facility discharge following heart failure hospitalization. *J Am Geriatric Soc.* 2020;68(1):96-102
24. Kim Y, Crandall M, Byon HD. Discharge communications for older patients between hospital healthcare providers and home healthcare providers: an integrative review. *Home Health Care Manage Pract.* 2022;34(2):125–32. Doi: 10.1177/10848223211052031. [CrossRef] [Google Scholar]
25. Fregonezi R, Neves E, Ferreira L, Barbosa J. Profile and burden chronic disease patients' caregivers followed by a homecare service in Brazil—a cross-sectional study. *BMJ Publishing Group Ltd;* 2018. 10.1136/oemed-2018-ICOHabstracts.957.
26. Ceylan E, Eskiyurt R, Koc A. Determination of the problems experienced by patients with chronic diseases and their caregivers during home care process from nursing students' perspectives: a phenomenological study. *Euras J Fam Med.* 2021;10(3):141–150. Doi: 10.33880/ejfm.2021100305. [CrossRef] [Google Scholar]
27. Ministry of Health and Medical Education (Iran). Home care regulations and instructions 2021 [Available from: <https://dn.behdasht.gov.ir>].
28. Dowding D, Russell D, Trifilio M, McDonald MV, Shang J. Home care nurses' identification of patients at risk of infection and their risk mitigation strategies: a qualitative interview study. *Int J Nurs Stud.* 2020; 107:103617. Doi: 10.1016/j.ijnurstu.2020.103617. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
29. Western B. Inside the box: safety, health, and isolation in prison. *J Econ Perspect.* 2021;35(4):97–122. Doi: 10.1257/jep.35.4.97. [CrossRef] [Google Scholar]
30. Hanssmann C, Shim JK, Yen IH, Fleming MD, Van Natta M, Thompson-Lastad A, Rasidjan MP, Burke NJ. "Housing is health care": treating homelessness in safety-net hospitals. *Med Anthropol Q.* 2022;36(1):44–63. Doi: 10.1111/maq.12665. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
31. Lincoln YS, Guba EG. But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Direct Prog Eval.* 1986;1986(30):73–84. <https://doi.org/10.1002/ev.1427>. <https://www.hopkinsmedicine.org/health/caregiving/types-of-home-health-care-services>
32. Davidson P, Brody A. Understanding the scope of home care: Personal care, nursing, and rehabilitation services. *J Health Care Home Health Nurs.* 2019;12(4):320–6.
33. Ruiz J, Wang S. Types of supportive home care services and their impact on elderly well-being. *Int J Geriatr Care.* 2022;18(1):55–63.
34. Miller S, Davis M. Diverse home care services: From companionship to specialized medical care. *Aging Health Serv J.* 2020;27(3):170–9.
35. Harris L, Wong C, Lee R. Factors driving the demand for home care: A review of demographic trends and policy initiatives. *Health Soc Policy.* 2020;35(3):187–205.
36. Yamada T, Suzuki M. Expanding home care services to meet growing demand: Lessons from developed countries. *Int J Home Health Care.* 2022;13(4):455–63.
37. Arcelus, A.; Jones, M.H.; Goubran, R.; Knoefel, F. Integration of Smart Home Technologies in a

- Health Monitoring System for the Elderly. In Proceedings of the 21st International Conference on Advanced Information Networking and Applications Workshops (AINAW'07), Niagara Falls, ON, Canada, 21–23 May 2007; Volume 2, pp. 820– 825. (Google Scholar)
38. Yang YB, Yang XD, Yang YJ, Yuan Q. Aptamer-functionalized carbon nanomaterials electrochemical sensors for detecting cancer relevant biomolecules. *Carbon* 2018; 129:380–95. [Google Scholar]
39. Ciui B, Martin A, Mishra RK, et al. Wearable Wireless Tyrosinase Bandage and Microneedle Sensors: Toward Melanoma Screening. *Adv Health Mater* 2018;7:e1701264. [PubMed] (Google scholar)
40. Wada, K., and Shibata, T. (2007). Living with seal robots: Its sociopsychological and physiological influences on the elderly at a care house. *IEEE Transactions on Robotics*, 23, 972-980.
41. Montemerlo, M., Pineau, J., Roy, N., Thrun, S., and Verma, V. (2002). Experiences with a mobile robotic guide for the elderly. Proceedings of the Eighteenth AAAI National Conference on Artificial Intelligence. Cambridge, MA: MIT Press;
42. Darkins, A., Ryan, P., Kobb, R., Foster, L., Edmonson, E., Wakefield, B., and Lancaster, A.E. (2008). Care coordination/home telehealth: The systematic implementation of health informatics, home telehealth, and disease management to support the care of veteran patients with chronic conditions. *Telemedicine Journal and E-Health*, 14(10), 1,118-1,126 [PubMed].
43. Finkelstein, J., O'Connor, G., and Friedmann, R.H. (2001). Development and implementation of the home asthma telemonitoring (HAT) system to facilitate asthma selfcare. *Studies in Health Technology and Informatics*, 84(Pt 1), 810-814. [PubMed]
44. Basch, E., Artz, D., Dulko, D., Scher, K., Sabbatini, P., Hensley, M., et al. (2005). Patient online self-reporting of toxicity symptoms during chemotherapy. *Journal of Clinical Oncology*, 23(15), 3,552-3,561. [PubMed]
45. Johnson M, Garcia L. Health and quality of life benefits of home care for elderly patients. *Aging Clin Care*. 2021;22(3):145–52.
46. Lewis A, Smith K. The impact of home-based care on patient satisfaction and healthcare outcomes. *J Home Health Nurs*. 2020;28(4):210–8.
47. Patel V, Walker E. Benefits of home care services for chronic disease management. *Chronic Illn Care J*. 2019;15(2):120–7.
48. Reilly T, Wong J. Enhancing patient autonomy and reducing hospital readmissions through home care services. *Geriatr Nurs Rev*. 2022;37(1):45–51.
49. O'Connell M, Brown R. Psychological and social benefits of home care for seniors: A review. *J Aging Soc Health*. 2020;18(2):103–9.
50. Nikbakht-Nasrabadi A, Shabany-Hamedan M. Providing healthcare services at home-a necessity in Iran: A narrative review article. *Iran J Public Health*. 2016;45(7):867-74. [PubMed ID: 27516992]. [PubMed Central ID: PMC4980340].
51. Castor C, Hallstrom I, Hansson H, Landgren K. Home care services for sick children: Healthcare professionals' conceptions of challenges and facilitators. *J Clin Nur's*. 2017;26(17-18):2784-93. [PubMed ID: 28334466]. <https://doi.org/10.1111/jocn.13821>
52. Dumas LG, Blanks C, Palmer-Erbs V, Portnoy FL. Leadership in nursing homes-2009: Challenges for change in difficult times. *Nur's Clin North Am*. 2009;44(2):169-78. [PubMed ID: 19463673]. <https://doi.org/10.1016/j.cnur.2009.03.005>
53. Dumas LG, Blanks C, Palmer-Erbs V, Portnoy FL. Leadership in nursing homes-2009: Challenges for change in difficult times. *Nur's Clin North Am*. 2009;44(2):169-78. [PubMed ID: 19463673].

<https://doi.org/10.1016/j.cnur.2009.03.005>

54. Ajlouni MT, Dawani H, Diab SM. Home health care (HHC) managers perceptions about challenges and obstacles that hinder HHC services in Jordan. *Glob J Health Sci.* 2015;7(4):121-9. [PubMed ID: 25946949]. [PubMed Central ID: PMC4802083]. <https://doi.org/10.5539/gjhs.v7n4p121>.
55. Hoge CW, Rye CB. Efficacy and challenges of in-home tele psychotherapy. *Lancet Psychiatry.* 2015;2(8):668-9. [PubMed ID: 26249278]. [https://doi.org/10.1016/S2215-0366\(15\)00226-6](https://doi.org/10.1016/S2215-0366(15)00226-6).
56. Heydari H, Shahsavari H, Hazini A, Nasrabadi AN. Exploring the barriers of home care services in Iran: A qualitative study. *Scientific (Cairo).* 2016; 2016:2056470. [PubMed ID: 27127677]. [PubMed Central ID: PMC4835654]. <https://doi.org/10.1155/2016/2056470>.
57. Callahan C. Dissemination science: Addressing challenges to the widespread use of evidence-based home dementia care. *Alzheimer's Dement.* 2016;12(7):P217. <https://doi.org/10.1016/j.jalz.2016.06.387>.
58. Shahsavari H, Nasrabadi AN, Almasian M, Heydari H, Hazini A. Exploration of the administrative aspects of the delivery of home health care services: A qualitative study. *Asia Pac Fam Med.* 2018; 17:1. [PubMed ID: 29410602]. [PubMed Central ID: PMC5781270]. <https://doi.org/10.1186/s12930-018-0038-x>.
59. Wringe A, Cataldo F, Stevenson N, Fakoya A. Delivering comprehensive home-based care programmes for HIV: A review of lessons learned and challenges ahead in the era of antiretroviral therapy. *Health Policy Plan.* 2010;25(5):352-62. [PubMed ID: 20144935]. <https://doi.org/10.1093/heapol/czq005>.
60. Hokenstad A. More care at home: The challenge of creating viable community alternatives to nursing home care. *Care Manag J.* 2005;6(1):9-14. [PubMed ID: 16447852]. <https://doi.org/10.1891/cmaj.2005.6.1.9>.
61. Mohammad N, Gikonyo J. Operational challenges community home based care (CHBC) for PLWHA in multi-country HIV/AIDS programs (MAP) for Sub-Saharan Africa. Washington, DC: World Bank; 2005.
62. Baron S, McPhaul K, Phillips S, Gershon R, Lipscomb J. Protecting home health care workers: A challenge to pandemic influenza preparedness planning. *Am J Public Health.* 2009;99 Supply 2: S301-7. [PubMed ID: 19461108]. [PubMed Central ID: PMC4504355]. <https://doi.org/10.2105/AJPH.2008.157339>.
63. Higuchi KA, Christensen A, Terpstra J. Challenges in home care practice: A decisionmaking perspective. *J Community Health Nur's.* 2002;19(4):225-36. [PubMed ID: 12494743]. https://doi.org/10.1207/S15327655JCHN1904_03
64. Lee JS, Rock BD. Challenges in the new prospective payment system: Action steps for social work in home health care. *Health Soc Work.* 2005;30(1):48-55. [PubMed ID: 15847237]. <https://doi.org/10.1093/hsw/30.1.48>.
65. Neergaard MA, Olesen F, Jensen AB, Sondergaard J. Shared care in basic level palliative home care: Organizational and interpersonal challenges. *J Palliat Med.* 2010;13(9):1071-7. [PubMed ID: 20799902]. <https://doi.org/10.1089/jpm.2010.0036>.
66. McBride SE, Beer JM, Mitzner TL, Rogers WA. Challenges for home health care providers: A needs assessment. *Physical occupational Therapy Geriatric.* 2011; 29:5-22. <https://doi.org/10.3109/02703181.2011.552170>.
67. Rantz MJ, Zwygart-Stauffacher M, Flesner M, Hicks L, Mehr D, Russell T, et al. Challenges of using

- quality improvement methods in nursing homes that “need improvement”. *J Am Med Dir Assoc.* 2012;13(8):732-8. [PubMed ID: 22926322]. [PubMed Central ID: PMC3461118]. <https://doi.org/10.1016/j.jamda.2012.07.008>.
68. Koru G, Alhuwail D, Topaz M, Norcio AF, Mills ME. Investigating the challenges and opportunities in home care to facilitate effective information technology adoption. *J Am MedDirAssoc.*2016;17(1):53-8. [PubMedID:26612483] <https://doi.org/10.1016/j.jamda.2015.10.008>.
69. Nikbakht-Nasrabadi A, Shabany-Hamedan M. Providing healthcare services at home-a necessity in Iran: A narrative review article. *Iran J Public Health.* 2016;45(7):867-74. [PubMed ID: 27516992]. [PubMed Central ID: PMC4980340].
70. Carretero S, Stewart J, Centeno C, Barbabella F, Schmidt A, Lamontagne-Godwin F, et al. Can technology-based services support long-term care challenges in home care? Analysis of evidence from social innovation good practices across the EU CARICT project summary report. European Commission; 2012.
71. Koru G, Alhuwail D, Topaz M, Norcio AF, Mills ME. Investigating the challenges and opportunities in home care to facilitate effective information technology adoption. *J Am Med*2016;17[1]:53-8 [PubMed ID:26612483] <https://doi.org/10.1016/j.jamda.2015.10.008>.
72. Penz K, Duggleby W. “It’s different in the home ...” the contextual challenges and rewards of providing palliative nursing care in community settings. *J Hospice Palliat Nurs.* 2012;14(5):365-73. <https://doi.org/10.1097/NJH.0b013e3182553acb>.
73. Suurmond J, Rosenmoller DL, El Mesbahi H, Lamade M, Essink-Bot ML. Barriers in access to home care services among ethnic minority and Dutch elderly—A qualitative study. *Nursstud.*2016;54:2335. [Pubmedid:25776734] <https://doi.org/10.1016/j.ijnurstu.2015.02.1>
74. Johnson JL, Adkins D, Chauvin S. A review of the quality indicators of rigor in qualitative research. *Am J Pharm Educ.* 2020;84(1).
75. Shahsavari H, Nasrabadi AN, Almasian M, Heydari H, Hazini A. Exploration of the administrative aspects of the delivery of home health care services: a qualitative study. *Asia Pac Family Med.* 2018;17(1):1–7.
76. Moradian ST, Nourozi K, Ebadi A, Khankeh HR. Barriers against providing home health care delivery to ventilator-dependent patients: a qualitative content analysis. *Trauma Monthly.* 2017;22(3):7.
77. Kiersey R, Coleman A. Approaches to the regulation and financing of home care services in four European countries. Dublin: Health Research Board. 2017;112.
78. Mitchell K, Gugerty L, & Muth E (2008). Effects of brief training on use of automated external defibrillators by people without medical expertise. *Human Factors*, 50(2), 301– 310. [PubMed] [Google Scholar]
79. Chiu C, & Man D (2004). The effect of training older adults with stroke to use homebased assistive devices. *OTJR: Occupation, Participation and Health*, 24(3), 113–120. [Google Scholar]
80. Mykityshyn AL, Fisk AD, & Rogers WA (2002). Learning to use a home medical device: Mediating age-related differences with training. *Human Factors* 44(3), 354–364. [PubMed] [Google Scholar]
81. Centers for Disease Control and Prevention (CDC). (2004). National Centre for Health Statistics: Health Data Interactive. Retrieved January 7, 2008, www.cdc.gov/nchs/hdi.htm
82. Winterstein AG, Sauer BC, Hepler CD, & Poole C (2002). Preventable drug-related hospital admissions. *Annals of Pharmacotherapy*, 36(7–8), 1238–1248. [PubMed] [Google Scholar]
83. Sherwin S and Winsby M. A relational Perspective on autonomy for older adults Residing in nursing

- homes. *Health Expect* 2011; 14(2): 182–190.
84. Paddock K, Wilson CB, Walshe C, et al. Care home life and identity: A qualitative Case study. *Gerontologist* 2019; 59(4); 655–664.
85. Unroe KT, Ouslander JG, and Saliba D. Nursing home regulations redefined: Implications for providers. *J Am Geriatr Soc* 2018; 66(1): 191–194.
86. Banerjee A and Armstrong P. Centring Care: Explaining regulatory tensions in Residential care for older persons. *Stud Pol Economy* 2015; 95(1): 7–28.
87. Bravo G, Dubois M-F, Demers L, et al. Does regulating private long-term care Facilities lead to better care? A study from Quebec. *Int J Qual Health Care* 2014; 26(3): 330–336.
88. Kumar R, Satapathy S, Adhish VS, Nripsuta S. Study of psychiatric morbidity Among residents of government old age Homes in Delhi. *J Geriatr Ment Health* [serial online] 2017; 4:36–41. <https://www.Tatatrusters.org/upload/pdf/report-on-oldage-facilities-inindia.pdf> (accessed March 21, 2021)
89. Martin L, Rogers T. Emerging trends in home care: Technology integration and personalized care. *J Home Health Care Trends*. 2022;34(1):22–9.
90. 4. Davis R, Chen M, Lin T. The impact of workforce shortages on home care services. *Elderly Health Serv Manag*. 2022;19(4):75–82.
91. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. National Academy of Sciences; 2001. <https://iom.nationalacademies.org/~media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf>. Accessed August 2, 2016. [Google Scholar]
92. Avalere Health. Home Health Chartbook 2015: prepared for the alliance for home health quality and innovation. http://ahhqi.org/images/uploads/AHHQI_2015_Chartbook_FINAL_October.pdf. Published October 2015. [Accessed August 2, 2016]