HOME HEALTH

Abstract

Home health refers to the care provided for a range of conditions or injuries in the comfort of the home. With the aging population, shift in family dynamics, innovation in technology, and changes in the healthcare industry because of the COVID-19 pandemic, the health requirements of a family have changed. There is an increased need for technological solutions that offer a range of functionalities making home health more accessible for both the patients and the providers. Given the recent rise, care at home or home health will play a big role in the ever-changing healthcare landscape.

What is Home Health?

The healthcare industry is changing with new emerging trends and technologies. The COVID-19 pandemic catalyzed many aspects of healthcare to reimagine the ways we deliver healthcare. The healthcare industry saw a shift, with people opting to get care at home.

Healthcare that requires the aid of trained professionals such as nursing staff and caregivers but does not necessarily need a medical care facility or hospital and can be provided from the comfort of home is referred to as home care or home health. Home health services can be provided on a full-time, part-time, or intermittent basis. This includes physical or mental care, postoperative care, physiotherapy, chronic care, nursing care, elderly care aid, etc.

The rising cost of healthcare has led to more people opting for at-home healthcare. This ensures the patient's comfort; care can be provided more acutely and is also relatively cheaper than hospitalization. For people with an increased risk of developing infections or serious complications, home healthcare can be a lifeline.

The Emergence of Home Care

Despite a slowdown in the economy, the home healthcare industry is growing quickly. Due to rapid urbanization, increased healthcare expenditure, and higher disposable incomes, the demand for home healthcare has steadily grown. With the aid of technology, patients with low-acuity needs can now receive hospital-quality care at home, and that too at an affordable cost. From the hospital perspective, researchers have seen that there have been lower hospital readmission and death rates after the use of home health services following inpatient care. Summarizing the major market drivers in the business:

COVID-19 Pandemic

The global outbreak of the coronavirus has emphasized the complex interdependencies within the global healthcare system. Hospitals were struggling to deal with the sudden influx of patients. People who had chronic conditions needed constant care, or people who were at elevated risk of infection suddenly had nowhere to go. Home care offers a range of health care services in the comfort of their homes. It includes detailed and practical insights into the patients and exemplary services by professional caretakers.

As a result of the COVID-19 crisis, more patients and their families are now considering long-term and post-acute care options. More patients are likely to receive some level of care at home through remote monitoring, telehealth, social support, and home modifications. Studies show that during the pandemic period, the use of telehealth was 38 times higher than pre-pandemic levels, and about 40% of consumers surveyed said they plan to continue using telehealth in the future.[1]

The rise in the aging population

For an aging population, Home Health provides primary-care visits via telehealth, skilled nursing-facility-like services at home with remote patient monitoring, and support for activities of daily living. Between 2015 and 2020, a 65-year-old individual could predict an average added lifespan of 17 years globally, which is projected to increase to 19 years by 2045–2050.[2] The expectation is for an overall rise in life expectancy at 65 across all countries during these periods. The aging population provides healthcare organizations (HCOs) with new opportunities to serve them as an expanding market.

The rising cost of treatment and inpatient hospital care

Global healthcare expenses are on the rise, driven by technological advancements, intricate medical procedures, diverse patient illnesses, shifts in government policies, elevated insurance premiums, and restricted coverages. In addition to these factors, the prevalence of diseases and the frequency of medical service utilization are also crucial elements contributing to the escalation of healthcare costs. According to the American Medical Association (AMA), healthcare costs are rising by about 4.5% a year, but in 2023, healthcare spending is expected to rise by 5.1%, from $4.2 trillion in 2022.[3]

Innovations in technology

The home care sector has seen ample innovation, supporting seniors as they age at home and avoiding avoidable emergency room visits or expensive nursing home placements. Remote Patient Monitoring (RPM) is a well-known example, involving in-home devices transmitting crucial patient data to healthcare providers. However, in-home technology extends beyond RPM, addressing diverse issues such as ride-share services for transportation-limited patients and medication management for seniors with multiple prescriptions. From 2020 to 2027, the market for home healthcare technology solutions is expected to expand at a compound annual growth rate (CAGR) of 7.9%.[4] With high patient demand, in-home technology will continue to expand in intriguing and unforeseen ways.

Chronic condition care

There is a major percentage of people suffering from chronic conditions who cannot travel to the hospital very often. And patients with multiple chronic conditions or disabled people. Home care is best suited for these people, and continuous monitoring is needed. Patients with quadriplegia (a chronic condition), after home healthcare, spent $12,807; those lacking in-home chronic disease management spent significantly more—nearly $30,000 extra, averaging $42,709.[5]

Decentralized Clinical Trials

Patients taking part in decentralized clinical trials also need at-home solutions to take part. Clinical trial kits would be delivered to the home and administered there. In recent years, factors like the COVID-19 pandemic have sped up the adoption of decentralized clinical trials. Utilizing digital technologies and planning, 24% of clinical trial studies now offer home-based participation, a number projected to rise.[6] With wearables and IoT (Internet of Things) devices, the data gets gathered and sent to the IoT Hub, which is used for tracking and making changes in treatment as necessary.

Why is Home Care needed?

For Patients

Home health holds several advantages. Care at home allows the patient to receive all the required medical care at ease in his or her own home. It also allows the rest of the family to provide emotional support and care to help the patient recover faster Prolonged hospital stays can be taxing physically and mentally and add to the anxiety of the patients. Care at home allows for customizing everything as per their requirements and comfort, unlike in hospitals, where everything is standardized. Such personalized, one-on-one care helps the patient get better faster.

This is also applicable to those who take care of someone else's well-being, be it caring for someone who is aging or has a disability. Simply taking some of these tasks off the plate—going to appointments, picking medications, etc.—is worth having an in-home nurse around.

Services may even include a well-trained and experienced caregiver who helps in the preparation of meals according to the doctor's or nutritionist's recommendations and ensures that the patient eats well. In cases of emergencies or worsening conditions, a trained in-home nurse will know the right ways to calmly deal with the situation, as the outcome of such emergencies often depends on how these crucial moments are handled. Whether the patient is dealing with chronic conditions, disabilities, postoperative recovery, or simply old age, home care allows them to receive customized care according to their needs from the comfort of their home.

For Provider

Home healthcare is beneficial to the provider organization in many ways. Someone making a career in home healthcare as a provider will enjoy:

1. **Schedule Flexibility:** Compared to nurses in acute care, home health nurses enjoy greater freedom in their schedule. This open flexibility grants freedom from often stressful hospital environments and long shifts.

2. **Job security:** In addition to living longer, healthier lives compared to earlier generations, many people are opting to "age in place." For this reason, the demand for skilled home health professionals is skyrocketing.

3. **Workplace Independence:** Being a home health care provider offers immense satisfaction and autonomy. Working independently, you can care for clients, make decisions, and take charge. Despite occasional challenges, seeing patients improve under your care is incredibly rewarding.

4. **Meaningful Relationships:** One of the benefits of working in home health care is the chance to build long-lasting, deep relationships with patients and their families – something that is unheard of in most clinical settings.

For Payers

Payers in the health care industry are organizations—such as health plan providers—that set service rates, collect payments, process claims, and pay provider claims. Without payers, providers may not receive payment for services provided, and patients would handle the total cost of their care.

Payers are targeting their member populations that will benefit the most from at-home care. The focus is on high-cost patients, palliative care, diabetes, home care visits, telehealth, and at-home testing. Some of the trends followed by the payers are:

- Aligning with physician groups
- Offering better house call programs
- Moving higher risk patients into home care
- Expanding technology for care management oversight

There is a significant hike in the number of older adults who require more supportive care as they continue to age. As a result, payers are trying to find innovative ways to care for members outside the walls of a hospital. Listing out a few programs by payers addressing various care management models in the home:

Patients with serious illness: Payers produce programs designed to support the person through the entire journey of serious illness, where they assign a care manager to severely ill members, who develop a holistic care plan for the member. As a person's serious illness progresses and the need for intervention changes from managing disease progression to preparing for a quality end of life, payers also provide an advanced care program to help members with care planning, hospice transition, and support at the end of life.

Free home visits for managed care patients: Some payers offer their members home assessments at zero cost, during which a clinician will visit to conduct a physical exam and risk assessment, including identifying fall risks.

Telehealth for chronic care: The program is designed for seniors with chronic health concerns and other functional challenges who want to remain in their homes longer. It follows a nationwide trend to use connected health to improve home-based care and reduce the strain on senior homes and skilled nursing.

Wearable technology and rise of remote monitoring devices

- Wearable technology is any electronic device designed to be worn on the user's body. This includes glucose monitors, insulin pumps, cardiac monitor patches, ECG monitoring patches, pacemakers, sleep monitoring and Fitbits.

- The number of health and fitness app users is expected to grow to 91.3 million through 2023, up from 88.5 million in 2022, according to Insider Intelligence research.[7] This upward trend will influence the various stakeholders of the healthcare industry to take advantage of the benefits these monitoring devices provide.

- Another advantage of these devices is the vast amount of data they generate. With advances in sensors and artificial intelligence, this data can be used to detect and manage chronic health conditions. It also holds exciting potential for tracking necessary information for decentralized trials.

Microsoft cloud for Healthcare

Home Health is one of the solutions offered on the MS cloud for healthcare platform, with which provider personnel can schedule appointments for the patient based on a variety of factors. Providers can view patient information directly in context, and guided business process flows to ensure that each measure is taken before and after booking the appointment.

Technologies aiding Home Health

With the rising need for consumerism and personalization in healthcare, technology plays a key role. Today, the advancement in technology is democratizing home care. Patients are getting increasingly comfortable with mobile devices and other smart technologies to avail themselves of healthcare at home. With remote patient monitoring, patients' health data can be gathered and transmitted to caregivers. Software devices designed to measure patients' vital signs like blood pressure, oxygen saturation levels, weight, heart rate, and temperature can take wi-fi-enabled readings.

Growing demand for telemedicine and virtual health

- Telehealth or virtual health involves technology to deliver medical care remotely. Its advantages are many including convenience, increased accessibility, cost effectiveness and reduced barriers to healthcare.

- While some consider telehealth to be the same as virtual visits, it includes many services. It allows you to directly connect with your provider, connect at once on a virtual platform in case of emergencies, regular emails/reminders for prescriptions, etc.

Foundational elements of a Home Care Solution- A perspective

Home care solutions need to be designed to provide all the necessary care for patients to enable them with self-help and automated solutions to continue care and avoid hospital visits while getting better quality of care.

For Provider/Payer

To provide a seamless experience for patients, providers are looking to develop various capabilities to provide self-service functionalities for patients, options to connect remotely for regular follow-up, watch vitals using IoT sensors, and gather the necessary patient data to provide better patient outcomes.

In the case of home visits, providers need to keep track of the workloads of care team members and their schedules for route optimization and better planning. During the home visit, care team members need to have access to the entire patient's details to provide better care.

Our perspective on foundational capabilities that provider and payers:

1. **Case management:** Create cases and work orders with patient identification, eligibility, assessment of healthcare needs, care planning, implementation, and monitoring.

2. **Schedule home visits:** Enable care coordinators to schedule home visits based on the patient's needs.

3. **Home visit coordination:** Coordinate the support and care with care givers for a home visit.

4. **Provider scheduling:** Helps simplify the process of scheduling home care visits based on the availability, skills, and prior experience of the care giver by optimizing visiting routes.

5. **Patient 360:** It provides a comprehensive view of all the patient's details, including their care plan, medications, allergies, condition details, and any other information pertinent to their medical history. Access to this information is available to the care team members working with the patient. Thus, they can make quick decisions in case of changes in conditions, medical side effects, or emergencies.

6. **Remote Patient Monitoring:** With IoMT platforms, physicians and nurses can monitor patients and get constant updates about the patients' health and help providers in decision making.

   a. **Vitals monitoring:** With wearable technology, mobile applications, and artificial intelligence models, a patient's vitals can be kept in constant check, and any disruptions can be flagged easily.

   b. **Medicine monitoring:** Taking medication at the correct time is very crucial for quick recovery. With Modern pill dispensers, providers can get notifications on medication.

7. **Patient Training:** Create self-training modules for patients to use the devices, understand the conditions and adhere to care plan activities.

8. **Analytics Dashboard:** The healthcare system creates a lot of data of the patient, the provider schedule, care givers etc. A dashboard provides a pictorial representation of all the important data points at one place making it easier to take intelligent decisions.

For Patients:

With Home care, patients can get care at the comfort of homes after they leave the hospital. They need to be supported with all the necessary tools to get continuity of care. For Example, Access to their information and options to connect virtually or create a home visit request, talk to agents for any help or guidance needed on using tools, understanding conditions, automated reminders for medication, personalized care plans based on the progress, etc., etc.

Our perspective on foundational capabilities for patients:

- **Patient notifications:** Notify patients with necessary alerts, or communication messages regarding arrival times of care team members, care plan activities, or any follow-up patient surveys.

- **Patient access:** Provide self service capabilities for patients to access their profile, a summary of their care plans, activities, earlier interactions, historical data.

- **AI (Artificial Intelligence) based Virtual Health Assistant:** To interact with AI enabled health assistant to get quick responses, create appointments, talk to live agents, and get necessary help when needed.

- **Omni channel live agent support:** Provide Omni channel support with unified and seamless experiences across all mobile and web channels.

Homecare Considerations

While providing opportunities to improve care, home care also presents several challenges, like patient privacy and safety, necessary infrastructure, patient education, clinicians' availability to provide home care at remote locations, data accuracy, etc.

With the rise in demand for remote healthcare offerings, there is pressure on providers to quickly adapt and diversify their offerings. But remote care does have limitations that need to be considered. It isn't possible to provide all kinds of healthcare remotely.

A big part of home care is remote monitoring devices, but there might be cases where a medical device shows incorrect readings. If these readings are then used to formulate a care plan, it ends up harming the patient. So, proper infrastructure maintenance and clinical audits must be planned to ensure care quality. In addition, healthcare providers will have to figure out several supporting factors if these technologies and devices are adopted on a large scale. Nurses, caregivers, and care team members need to be given sufficient training before they attend to a patient at home.

In recent years, Artificial Intelligence and Machine Learning in healthcare for things like disease detection and diagnosis has become prevalent. The data models being used to train these must be selected extremely carefully, keeping in mind the truly diverse human experience. Patients of different ages and genders might display different symptoms. There can be changes based on geography, climate, and other factors.

Conclusion

Over the forecast period from 2023 to 2032, the global home healthcare market is expected to grow at a compound annual growth rate (CAGR) of 10.1% from USD 302 billion in 2022 to USD 786.85 billion by 2032.[8] Investments in upcoming technology, followed by the adoption of artificial intelligence in healthcare, are two factors that will present huge opportunities in the forecast period.

Globally, the increase in elderly patients is one major factor driving the growth of the home healthcare market, particularly in developed countries like Germany, France, Japan, and the United States. The World Health Organization estimates that between 2015 and 2050, the number of people over 60 will double from 12% to 22%.[9]

The future looks bright for players in the home healthcare market, but home health care services may grow depending on a range of factors. To start with, Care at-home providers, technology companies, and investors could play a role by accelerating innovation to deliver effective services at home to treat patients' physical, behavioral, and social needs. Growth may also depend on the physicians' awareness and capabilities to research case studies and results and gain training on delivering high-quality care at home. Lastly, patients could be made aware of home health options, and they could state a preference for them over facility-based care.

Reference

1. Telehealth: A quarter-trillion-dollar post-COVID-19 reality? | McKinsey & Company

2. Home Healthcare Market Size, Share & Growth Analysis Report By Equipment Type, By Service - Global Industry Analysis, Trends, Segment Forecasts, Regional Outlook 2023 – 2032 | Precedence Research

3. Why Do Healthcare Costs Keep Rising? | Investopedia

4. How is technology affecting home healthcare? | RemoteState

5. The Impact of In-Home Chronic Disease Management on Spending | Health payer Intelligence

6. Decentralized Clinical Trials – a growing trend driving improved patient outcomes | Fierce Pharma

7. Latest trends in medical monitoring devices and wearable health technology | Insider Intelligence

8. Home Healthcare Market Size, Share & Growth Analysis Report By Equipment Type, By Service - Global Industry Analysis, Trends, Segment Forecasts, Regional Outlook 2023 – 2032 | Precedence Research

9. The world's population is rapidly ageing | World Health Organization

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