Theme Assessment
Home Healthcare

A win-win for all stakeholders

Edition for Germany, Italy, Liechtenstein, Luxembourg, Austria

Swisscanto

Executive Summary

– Home care services, whenever applicable, help to reduce healthcare costs, with a similar or even more favourable outcome.

– Home healthcare is still underpenetrated in many countries, including the USA.

– Social aspects are the most pronounced from an ESG perspective.

– Profit pools amount to USD 12-13bn in the USA alone, with the highest volumes within skilled care, hospice and home medical equipment.

– The most pronounced risks include reimbursement schemes (pricing), wage inflation, service quality and litigation.

– Most focused investment opportunities are to be found in the USA.

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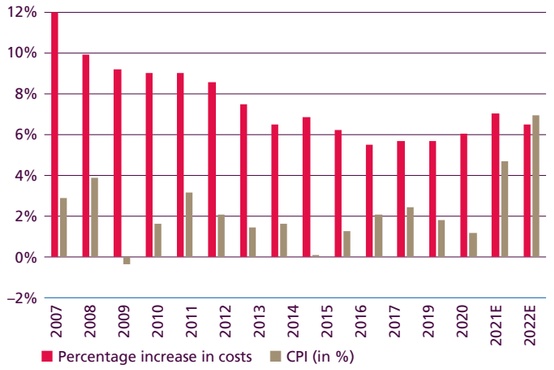
Analysed regions: Global
Theme: Access to healthcare
Sub-theme: Non-major healthcare services – Nursing and personal care

1 Problem description – Rising healthcare costs in a global perspective

Healthcare costs have been rising across the globe for many years. Data availability and, more importantly, the range of investable specialised companies is by far the most advanced in the USA. The aim of this paper is to provide a global context whenever possible, or at least to address common healthcare-related issues for any developed country.

Healthcare spending per capita (Graph 2) in absolute terms is the highest in the USA. Even though the rate of growth (Graph 1) in total medical costs declined in the second half of the last decade, momentum is expected to reaccelerate with the progressive ageing of the population.

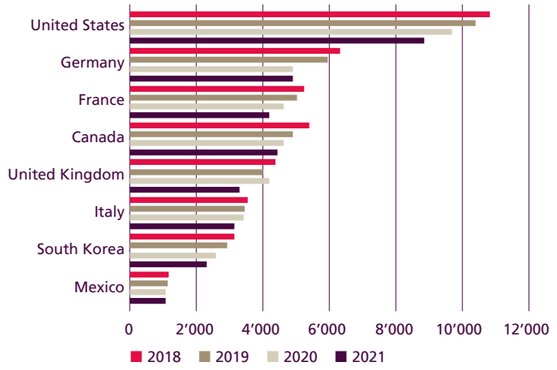
Graph 1:
USA, change in medical costs, 2007–2022



Sources: Statista / WHO, World Health Statistics 2022

Industrialised countries generally have to deal with rising healthcare spending, as the following graph (graph 2) illustrates. The **rise in costs per capita** is often higher in percentage terms in countries other than the USA, although from lower absolute levels. Concentration on pre-pandemic data shows a clearer picture of underlying structural trends, as the pandemic had an exceptional, but not necessarily persistent impact on actual healthcare costs.

Graph 2:
Healthcare spending per capita in selected countries (2013, 2015, 2017, 2018), in USD



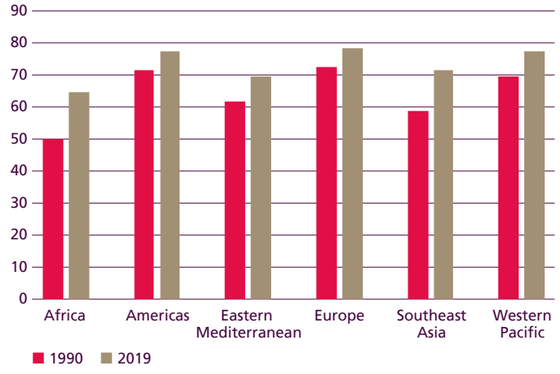
Sources: Statista / OECD, CHCF (California Health Care Foundation): California Health Care Almanac, June 2021

Key drivers behind this trend include well-known factors such as an **ageing population, rising life expectancy** and **technological progress.** The greater sophistication of treatment methods or new development of previously uncovered or untreatable medical indications usually tend to **increase the overall cost load for the benefit of better quality** or, in the best case, definitive cures.

Apart from progress on the quality of medical services, other cost driving factors such as demographics are very foreseeable. Even though access to healthcare is perceived as an essential human right by a majority of people across the globe, healthcare-related costs or at least their growth rate need to be contained in order to secure a broad supply in sufficient quality of medical goods and services for the entire population of in any country.

Life expectancy (Graph 3) is an undisputable indicator to measure the progress and quality of healthcare systems. In underdeveloped and economically poorer regions such as Africa the significant improvement in the past 30 years is most likely to be also due to improving food supply and general economic progress.

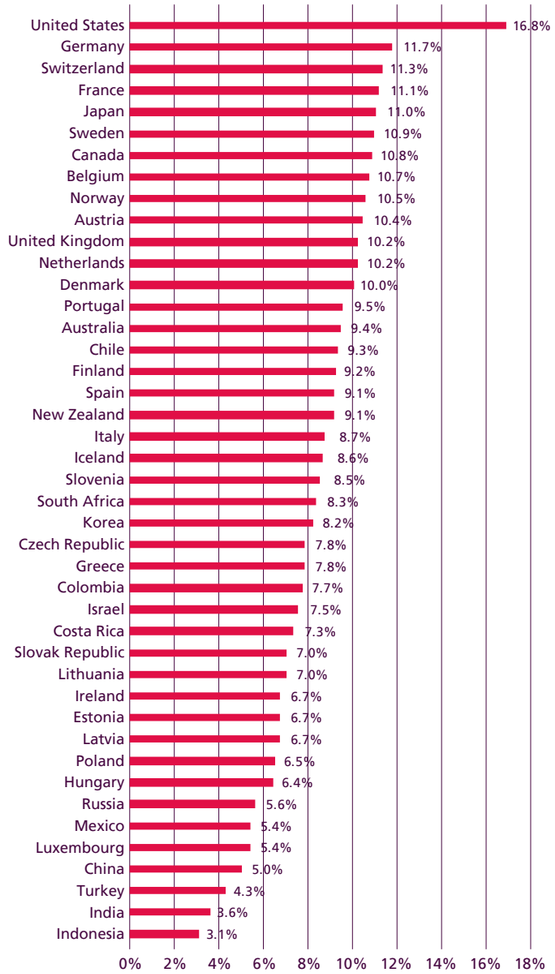
Graph 3:
Life expectancy by region (1990 & 2019)



Source: PwC Health Research Institute (HRI), June 2021

Funding of an advanced healthcare system and an ever-rising number of care recipients is a major constraint. The issue of exuberant absolute levels (Graph 4) as well as growth in healthcare costs is particularly urgent in the USA, but generally most industrialised regions with unfavourable demographics such as Japan or Northern Europe will also be at risk of having to cut back medical services in the long term.

Graph 4:
Healthcare costs in % of GDP, by country, 2019

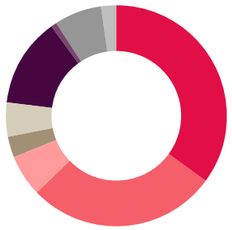


Source: Statista / OECD, 2019

Apart from rationalisation measures, reduction of highly cost-intensive care, and forced price cuts for medical products and services, there is a need for new forms of cost containment.

Taking the USA as an example of a highly developed, but expensive healthcare system, nearly two thirds of total expenses are related to hospital care and professional services such as outpatient procedures or doctor visits, which involve a lot of human resources (Graph 5).

Graph 5:
US healthcare expenditure by use (2022 estimates in USD bn)



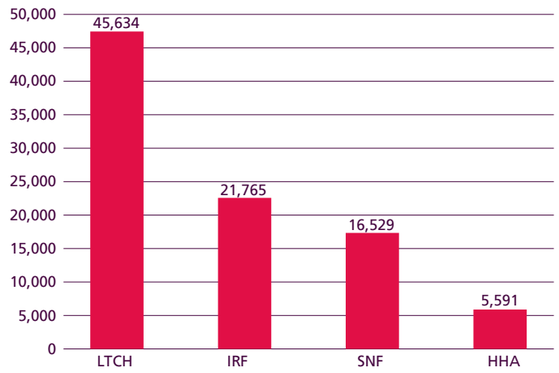
Use	USD bn	Share
Hospital Care	1,476	35%
Professional Services	1,173	28%
Other Health, Residential and Personal Care	235	6%
Home Healthcare	133	3%
Nursing Care Facilities and Continuing Care Retirement Communities	201	5%
Retail Outlet Sales of Medical Products	547	13%
Government Administration	58	1%
Net Cost of Health Insurance	314	7%
Government Public Health Activities	105	2%
Total	**4,243**	**100.0%**

Sources: RBC / CMS, Office of the Actuary, National Health Statistics Group , January 2022

Transferring only a fraction of these major cost brackets into lower cost environments such as 'Home Healthcare' or at least to 'Rehab' or 'Skilled Nursing' facilities, would open up significant savings potential.

The following model calculation (Graph 6) was performed by MedPAC[1] for the US healthcare system to compare costs across different treatment settings. The average payment amount was derived by dividing total Medicare spending for the setting by the number of patients served. The cases tend to vary by acuity levels, length of stay and staffing intensity. Obviously, difficult cases with high acuity and staffing intensity would not qualify for a home care setting, but those conditions are far less divergent between Skilled Nursing Facilities (SNFs) and the home setting. According to a representative data collection that was published by a non-profit health corporation based in Michigan/US[2] the **most frequent indications of home care patients** in the methodology of ICD coding (International Statistical Classification of Diseases and Related Health Problems) include post-operative care, physical aftercare, heart failure and intracranial injury incidents. This list is far from conclusive and there is a large variety of indications that are manageable in a home care setting. The severity of cases of rehab or nursing home patients is often at a similar level to "home care discharges".

Graph 6:
Medicare payments per case (2020) by service entity



Source: MedPAC

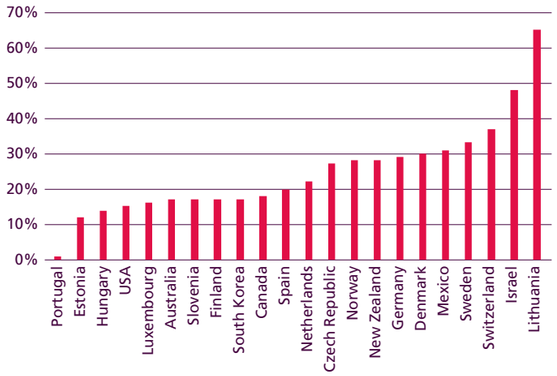
This supports the case for **massive potential cost savings** if treatment or service items can be redirected from Long-term Care Hospitals (LTCH) to Inpatient Rehabs (IRF), Skilled Nursing Facilities (SNF), or even more optimally, to Home Health Agencies (HHA). Industry experts estimate that at least 1/5 of SNF (Skilled Nursing Facilities) patients could be treated in a home care environment.

According to a survey of 1,000 adults and 75 health insurance managers conducted by Care Centrix, around two thirds of patients have a strong **preference** for at-home recovery and treatment, and almost 100% of insurers support the notion that moving healthcare to the home would be in the best interest of patients and also most cost effective. By age group, older generations have a particularly strong preference to stay in their communities or place of residence, according to an AARP survey for the USA. Opinion clusters have been just as clear even before the pandemic crisis unfolded. The Covid crisis has acted as an additional catalyst for providers to seek for and prefer home treatment options.

Hence, providing healthcare services at home whenever possible tends to be **a win-win option for both patients and funders.** Although the data for specific cost analysis and surveys is predominantly sourced from the USA, implications for the relative attractiveness of home healthcare and for other developed markets are very much alike.

The potential for home healthcare appears to be far from fully exploited when comparing between various countries (Graph 7):

Graph 7:
Persons aged >80 years receiving long-term care at home in OECD countries



Source: David C. Grabowski, Department of HC Policy, Harvard Medical School, Boston MA, published 14.1.2021

Detailed definitions and survey implementation may not have been consistent across the globe. Still, looking at the data for the largest market, the USA (15% penetration among those aged >80 years), there should be a broader definition, including **skilled nursing** in the home and **personal care.** The latter entails custodial support activities for daily living, which is a non- or lower-skilled type of support service for people who are not in full command of their mental and/or physical capabilities. Meaningful **differences in penetration** can be related to cultural conventions and reimbursement conditions.

Apart from the obvious value proposition, **new laws and social support programmes** in countries like Switzerland which aim to promote home care should also drive progress in favour of home care relative to traditional care facilities. Measures include financial support and/or paid leave grants to people who provide care services for their relatives in their home. In the USA, the development of home care is likely to be more dynamic and faster, as **managed care** companies have a natural incentive to provide reimbursement for more cost-effective forms of care, and some of the listed managed care companies are already pushing for vertical integration.

Market size

Estimates of **the market** size of the home healthcare market vary widely between different studies. Results of independent calculations range between annual volumes of USD 85bn to 150bn for the USA. On a global scale, the range is even wider: USD 200bn–400bn. What all market studies have in common is that they assume considerable **growth** potential. Mid-term forecasts for the remainder of the current decade suggest significant growth potential of up to 10% annually, which means a doubling of the market size every 7–8 years.

In the USA, the latest official assessments quantify the market size of the home healthcare market for 2022 at USD 133bn, which is already a significant size, although market penetration still leaves plenty of room for further growth.

Home healthcare market segments

Along the cost curve of different healthcare settings, home care comes just after low-cost community services such as wellness programmes or preventive initiatives promoting a healthy lifestyle and so on. Nursing homes, rehab or hospitalisation facilities at the high end usually mean both much higher costs and life constraints for the patients concerned. Digging deeper, key product categories and related support services in the home care setting comprise the following:

[1] MedPAC=Medicare Payment Advisory Commissions, 2022; https://www.medpac.gov/wp-content/uploads/2022/03/Mar22_MedPAC_ReportToCongress_SEC.pdf

[2] Blue Cross Blue Shield of Michigan Home Healthcare Coding Tip Sheet; https://www.bcbsm.com/content/dam/public/Providers/Documents/help/faqs/icd10-tipsheet-home-healthcare.pdf

1. Skilled care at home
Home care in the traditional sense is of a more short-term nature. The rationale is to minimise the length of hospital or rehab facility stays. Patients tend to be aged 65+.

2. Hospice
Hospice services include services for terminally ill patients with a life expectancy of maximum 6 months. The focus is on palliative care rather than curing specific diseases or improving conditions, but in the majority of cases, patients are still based in their homes. Other settings may occur in assisted living facilities or skilled nursing homes.

3. Non-skilled attendant care
This segment includes "non-skilled" personal care for daily living. The largest age cohort includes the 85+ group.

4. Pediatric private care
Pediatric care is related to chronically ill children and young adults. Length of treatments can be longer than 10 years. The overall patient base is rather small and more stable than for elderly patient groups.

5. Home medical equipment
Durable medical equipment is required to treat chronic medical conditions such as COPD (pulmonary disease), diabetes, incontinence, heart disease and stroke, sleep apnea, etc., which are well-suited for treatment at home.

6. Home infusion
This includes medications that cannot be taken orally. While traditionally, infusions were administered in hospitals or specialised outpatient facilities, the home setting only requires the equipment and a nurse. Patients can even be trained to administer infusions themselves.

7. Tele-Medicine
Consultations are held in a virtual format, for example via a phone and/or video connection. Both the patient (consumer) and the funder (health insurance/government) benefit, as the setting involves a more structured and therefore less costly treatment process. It may even improve the range of outcomes for patients as the bar for getting medical advice tends to be much lower than for a consultation in an emergency hospital setting. In the context of this study, the scope of Tele-Medicine is narrowed down to the effective provision of therapeutic and related services in the home care setting. Our previously published eHealth (2021) assessment already addresses other and broader aspects of Tele-Medicine.

2 Theme identification/SDGs

Home healthcare to promote well-being and more efficient use of financial resources
Healthcare costs have been rising across the globe for many years, with the most pronounced increase in absolute terms in the USA. The need for more efficient and less costly ways to providing healthcare is essential in order to at least maintain the quality of healthcare.

Providing **healthcare services directly at home whenever possible** rather than in a costly facility is a compelling value proposition. It makes healthcare more affordable in the context of ageing societies across the globe.

Affordable and efficiently managed healthcare services are an important shared benefit in order to minimise the financial burden and avoid financial hardship for the population and for public finances.

Ensuring healthy lives and promoting well-being (UN SDG 3) for the whole population of all ages is the key defining goal for any player in healthcare systems across the globe.

In particular, the following SDG targets are addressed:

3.8 improving access and affordability of essential healthcare services and medicines, and more specifically **3.8.2 referring to large household expenditures** on health as a share of total household expenditure.

Target 3.b mainly refers to access to affordable essential medicines, but affordability and access should also be considered crucial for services.

Recruitment and development of the health workforce (target 3.c) is an additional factor, as healthcare services are very labour intensive.

The population must be offered broad access to healthcare services to ensure healthy lives and to **promote well-being for all income classes.** Home healthcare is a setting that can broaden healthcare coverage due to both greater convenience and lower cost. It can help to make savings on the heaviest but less decisive cost items such as high-cost real estate or more efficient capacity usage of limited facilities space. The most optimal cures and care solutions are still ensured with the growing penetration of healthcare services at home.

Sustainability matters
Providing healthcare and support services at home offers benefits for both care recipients and paying institutions. The relevance and worth in terms of serving a socially valuable purpose is unquestionable.

The sector-specific materiality map developed by SASB (Graph 8) for healthcare emphasises the great relevance of **social issues** for healthcare providers. We would also underline the high priority given to quality of service from the perspective of both recipients and service staff. Human capital management and retention are particularly important as frontline service people have a meaningful effect on service quality perception and execution. **Affordability** should usually be fulfilled, as the cost advantage is the key aspect of the value proposition for home care services. In terms of **governance, business ethics** are a key requirement for successful long-term commercial operation. **Environmental** issues are a lesser concern with regard to healthcare services, but, nevertheless, responsible **management of medical waste disposal** is vital to minimise the risk of infection or injury. Curing and caring at home may require higher degrees of mobility for frontline staff than a stationary setup in a hospital or nursing facility, but service providers have a strong cost incentive to minimise business driving hours and thereby avoid unnecessary traffic.

Graph 8:
SASB Materiality Map (Healthcare Delivery highlighted):

Issues	Healthcare					
	Bio-technology	Pharma-ceuticals	Medical Equipment and Supplies	Health-care Delivery	Health-care Distribution	Managed Care
Environment						
GHG emissions						
Air quality						
Energy management						
Fuel management						
Water and wastewater management						
Waste and hazardous materials management						
Biodiversity impacts						
Social Capital						
Human rights and community relations						
Access affordability						
Customer welfare						
Data security and customer privacy						
Fair disclosure and labelling						
Fair marketing and advertising						
Human Capital						
Labour relations						
Fair labour practices						
Employee health, safety and well-being						
Diversity and inclusion						
Compensation and benefits						
Recruitment, development and retention						
Business Model and Innovation						
Lifecycle impacts of products and services						
Environmental and social impacts on core assets and operation						
Product packaging						
Product quality and safety						
Leadership and Governance						
Systemic risk management						
Accident and safety management						
Business ethics and transparency of payments						
Competitive bahaviour						
Regulatory capture and political influence						
Materials sourcing						
Supply change management						

Source: SASB (sasb.org), 2021

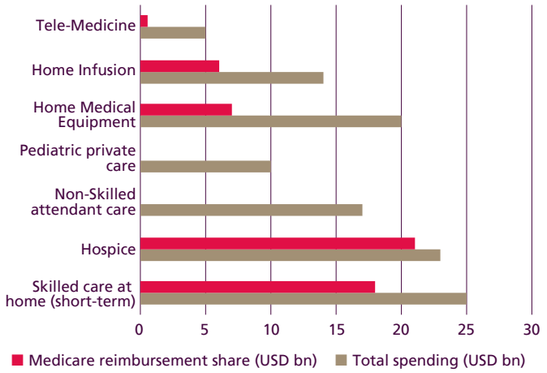
Industry and key factors of concern are highlighted in dark blue. In general, dark-shaded areas represent higher materiality according to the SASB methodology.

3 Theme assessment

As already mentioned, estimates for total **market volumes of the home care industry** have rather broad ranges, for both the USA and other markets across the globe. Possible explanations for great variations in market assessments include the non-uniformity of definitions and the lack of data transparency, particularly in more socialised markets with a much lower degree of privatisation than in the USA. As in other segments of the healthcare industry, the universe of listed companies tends to be much broader in the USA than elsewhere, where there are very few companies with a meaningful direct exposure to home healthcare.

Current market volumes of key home care subsectors in the US market, as defined in chapter 1, have been quantified as follows (Graph 9):

Graph 9:
Size of home healthcare subsectors in the USA



Sources: CMS, BofA Research estimates

The overview provides additional data about the **involvement of Medicare** as a funder. The various involvement of Medicare by subsectors is mostly comprehensible, as it is basically the public health insurance for the elderly. Medicare involvement usually means extensive regulation of reimbursement rates and service provisions. The remainder of the cost is paid by either Medicaid etc. or commercial (private) insurance, with a certain self-payer element for recipients of medical benefits.

3.1 Drivers

Labour supply and demand

Healthcare and related services require a high labour input for both skilled and non-skilled tasks. Supply and demand of qualified medical or support staff have been disrupted in the recent pandemic years. Increasing **labour supply constraints** and rising wages in general have been driving up costs. As reimbursement rates are often administered by a controlling government entity such as Medicare or Medicaid in the USA, there is a **lagging effect** on the bottom line and for an additional supply of required staff to be established. The pandemic crisis brought additional pressure, as some staff were on leave, at least on a temporary basis, due to widespread Covid infections. This led to rising wages and above-average use of temporarily employed nursing staff. From a structural point of view, the need for healthcare personnel is constantly increasing, due to **ageing societies** in developed countries, which is an obvious **demand driver.**

The **value proposition of taking care of patients in their homes** even has the potential to outpace the contribution of demographics to home healthcare. Hence, apart from high odds for continued demand, both cost and labour availability are key factors for the speed of increasing market penetration.

Effects of the pandemic

The recent **pandemic** crisis had exceptional effects on labour availability and overall cost development. Home care services related to elective procedures that can be postponed were at least temporarily subdued. On the other hand, demand for online consultations and general medical advice encountered a meaningful upswing, which is most likely here to stay, at least for routine consultations.

Regulatory impact

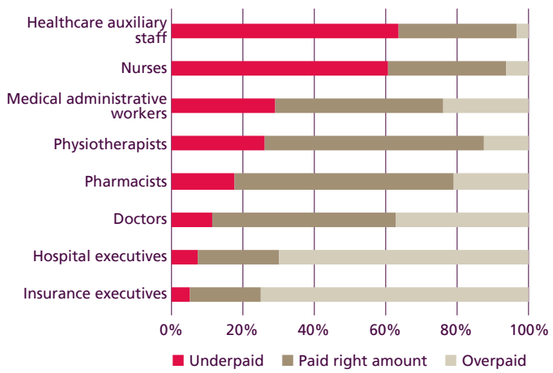
Regulatory interventions are numerous in most healthcare systems across the globe. Even in the USA, which tends to have a more privately managed and incentivised system, **government regulation** plays a major role. This starts with the **dominant role of Medicare and Medicaid,** and it ends with **guidelines** focused on outcomes and quality. Regular updates of **reimbursement rates** can have a meaningful impact on the actual profitability of the home care services industry, as underlined by the negative reaction to a recent pricing proposal by the US government to cut Medicare payments for home care agencies

by 4% in the coming year. **Managed care organisations** with their explicit focus on the profitability of predefined outcomes, have a compelling incentive to opt for the lowest cost option for any desired outcome. Specifically for the home care services industry, regulation has enforced a new **reimbursement model,** the PDGM ("Patient-Driven Groupings Model"), which was introduced in 2020. This is a **value- (or outcome-) based scheme** that relies on clinical conditions (ICD coding, chapter 1) and individual patient information, but not on the number of therapy "units" consumed. The ultimate goal is to make the home care service more need-based, and that specialised service staff are used more efficiently. Most regulatory measures tend to benefit the larger, more efficient companies, and unsurprisingly, many smaller organisations have already been driven out of business.

Wage inflation

Public perception of the wage levels of healthcare workers (Graph 10) tends to be quite supportive for nurses and auxiliary staff in the care sector. However, as public funds are involved to a great extent, there are funding constraints despite the support of public opinion. Efficiency management and allocation of available healthcare staff resources will become even more important in the future, in the light of constrained government finances across the globe.

Graph 10:
Public opinion survey of wages by healthcare profession (US 6.2021)



Source: AP-NORC, U.S. June 10-14, 2021

Cost management is a key discipline for maximising best outcomes in both quantitative and qualitative terms. Incentives may entail that attractive returns on R&D investments or efficiency management are best achieved with a value-based approach. Funders such as insurance companies or managed care organisations may also have a meaningful impact on total spending relative to the actual outcome. In theory, healthcare systems that are heavily regulated and more tilted towards government management and intervention, or are even fully socialised, tend to be less efficient or at least provide less choice or capacity. Nevertheless, the USA has one of the most criticised healthcare systems, as underlined by the following ranking published in August 2021, which compares the USA with 10 other high-income countries (Graph 11).

Graph 11:
Performance rankings for 11 high-income countries (the lower the ranking, the more positive the performance)

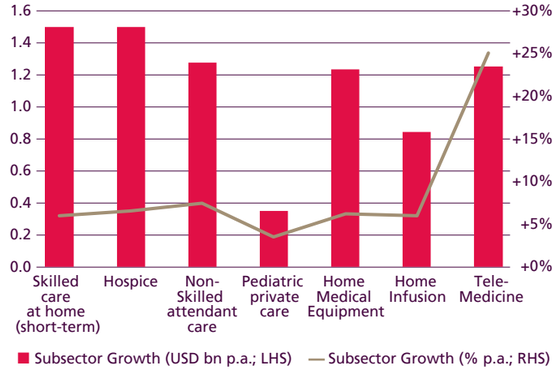
Sources: Commonwealth Fund, OECD

Performance criteria included access to care, healthcare outcomes, administrative efficiency, and the care process itself. With the exception of the latter criteria, the USA scored the worst among selected countries. Promotion of home healthcare should be an effective measure for the USA to improve its performance on the cost side, as it is **more need-based and cost-effective.**

3.2 Economic potential

The market for home care in the broadest sense is forecast to grow by approx. +7% annually in the USA Growth rates by previously defined subsectors in monetary volumes and in % are as follows (Graph 12):

Graph 12:
Outlook for home care subsectors



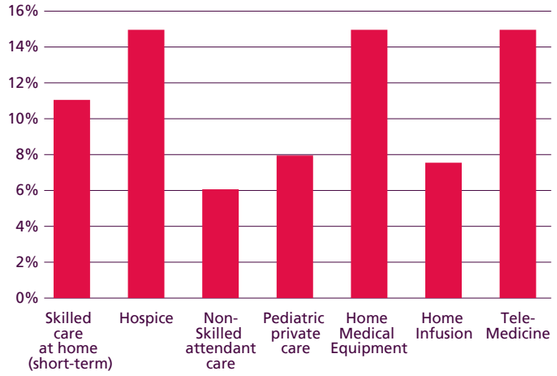
Source: BofA Research estimates

While pediatric care clearly shows the slowest growth in both absolute and percentage terms, Tele-Medicine is growing much faster (+25%) than any other segment, although from a much lower base, which means that absolute market expansion in $-terms is the highest for skilled care at home and hospice.

Margins

The **margin potential** in the healthcare sector is **capped,** at least on the service side, as scalability has economic limits and government as a major funder plays a key role. Drugs and medtech are the exception, as variable production costs are usually less decisive than R&D input and actual approval processes and patent protection. The larger the patient base the broader the spread of fixed costs among the patient base in that segment. EBITDA margins are usually at least 30% for pharmaceuticals, depending on the maturity of the product portfolio, and a bit lower for medical devices, which is higher than in most home care subsectors:

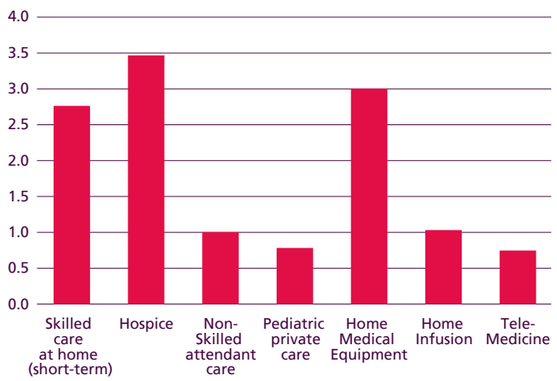
Graph 13:
EBITDA margin outlook by home care subsectors (USA)



Source: BofA Research estimates

Multiplying previous market estimates by subsectors with the corresponding mid-term EBITDA projections results in a **profit pool** amounting to approx. USD 12-13bn for the USA alone. Distribution among home healthcare subsectors (Graph 14) shows the highest monetary potential for hospice, equipment and skilled care. We assume these forecasts to be comprehensive and would underline a high conviction of their feasibility within a mid-term (5-10 years) time horizon. However, we would see the highest deviation risk in the Tele-Medicine segment, as the operating leverage and deviations between single companies is rather uncertain.

Graph 14:
Profit pools (USD bn, EBITDA) by home care subsectors (U.S.)



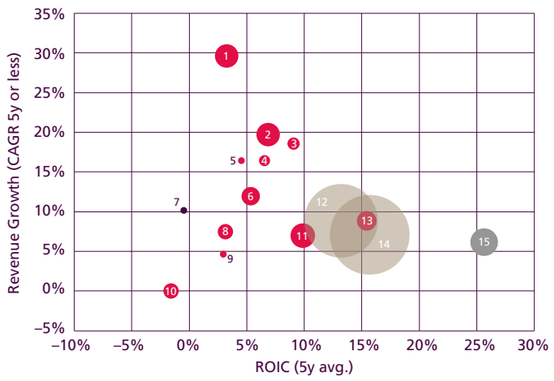
Source: BofA Research estimates; Swisscanto calculations

3.3 Solutions

Most home care subsectors, as defined before, are still highly **fragmented.** In the USA, even the largest players have an overall market share (as measured by their revenue bases) of less than 3%. With the exception of 'Home Infusion' and 'Tele-Medicine' the top 10 providers do NOT account for more than a quarter of the corresponding market segment. Many companies are privately held, while others are part of a larger managed care institution (e.g. Kindred at Home recently acquired by Humana, or LHC Group, which received a bid offer from United Health Group).

The following bubble chart (Graph 15) illustrates the relationship between growth and stage of ROIC development. Most companies have a diversified business mix that includes different types of home care services. Nonetheless, they are specialised in some way in one of the previously defined subsectors, which is highlighted by corresponding colouring.

Graph 15:
Growth, returns and market caps of home healthcare companies



1 OPTION CARE HEAL
2 LHC GROUP INC
3 SUMMERSET GROUP
4 ADDUS HOMECARE
5 AMBEA AB
6 RYMAN HEALTHCARE
7 AVEANNA HEALTHCARE
8 KORIAN
9 ATTENDO AB
10 ADAPTHEALTH CORP
11 ENCOMPASS HEALTH
12 HUMANA INC
13 AMEDISYS INC
14 HCA HEALTHCARE I
15 CHEMED CORP

Source: Bloomberg/FactSet, Swisscanto

3.3.1 Skilled care at home

This segment of home care comprises **skilled care at the home** of the patient, but also specialised group and assisted living facilities. Service providers can include nurses and auxiliary staff, therapists and social workers. In the USA, the bulk of the skilled care at home is paid for by Medicare.

The leading institution in this space, formerly private **"Kindred at Home",** has recently been acquired by the largest Medicare focused managed care organisation, Humana. Another institution with a clearly lower national market share (approx. 1%) is owned by the leading hospital management group, HCA. Hence, vertical integration or consolidation is a viable strategic guiding principle for remaining still independent providers such as **Amedisys, Encompass** (Enhabit Home Health & Hospice) and the like. The greatest potential for a more efficient market setup lies in the high fragmentation of home care management organisations. In the USA alone, there are more than 10,000 home health agencies. Outside the US, the choice of listed companies is more generalised. These companies usually have a diversified portfolio of services, including nursing homes, specialty clinics, shared accommodations, separate home care services and support. Those include Korian and LNA Santé (France), Attendo AB and Ambeo AB (Sweden), Ryman Healthcare Ltd. and Summerset Group Holdings (New Zealand), as well as Amvis Holdings (Japan).

3.3.2 Hospice

The hospice segment deals with people who do not have any curative options for treating or improving their medical indications. Hospice patients are usually treated at their home, or, if required, live in facilities that offer assistance or skilled nursing services. The segment could be described as **end-of-life care** for patients with a life expectancy of six months or less, which often concludes with palliative care. Most common diagnoses include cancer, dementia or cardiac disease.

Most hospice service companies are also involved in skilled home care. The purest player in this segment is VITAS Healthcare, a subsidiary of **Chemed,** which also owns Roto-Rooter, a well-known plumbing and water purification service provider that is about the same size in terms of profit contribution.

3.3.3 Non-skilled attendant care

This segment does not necessarily include healthcare services in a narrow sense, as it may include **daily living activities** other than medical products or therapy adherence. These services are meant to support people with health issues, who could otherwise not stay in their familiar surroundings in their home. By age cohort, more than a fifth of the group of over 85-year-olds are in need of these additional personal care services, which help keep patients outside costly professional facilities for as long as possible.

Addus HomeCare Corp. (ADUS) is the largest listed company in this space. It is also the purest player, with more than 38,000 interactions per day on average, followed by **ModivCare** Inc. (MODV) and some more diversified home care providers: **Kindred at home (Humana), LHC or Amedisys.**

3.3.4 Pediatric private care

Pediatric care refers to **chronically impaired children** and young adults. The patient base is relatively small, estimated at up to 100,000 patients in the USA alone. But it is of longer-term nature, unlike other segments that mainly deal with elderly people. The duration of the care provided is from three to more than 10 years, depending on the medical indication. If it is possible to care for patients at home, the service cost is only a fraction (6-7%) of an intensive care unit. The patient base is more stable, with a lower growth rate (up to 4%). In the USA, the bulk of the cost is reimbursed by Medicaid through single states, which means similar margin levels to non-skilled care (described in the previous sub-chapter).

Aveanna Healthcare Holdings (AVAH) is the largest and only listed provider with an estimated market share of 11% in an otherwise still very fragmented market.

3.3.5 Home medical equipment

Home medical equipment is a sub-industry (about 1/3 in size) of durable medical equipment. It supplies and services a relatively broad range of products, from oxygen providers and insulin pumps to wheelchairs and ventilators. Anticipated growth for medical equipment in general is clearly faster than GDP (6%), even accelerating from the past 20-year growth pace (approx. 4.5%).

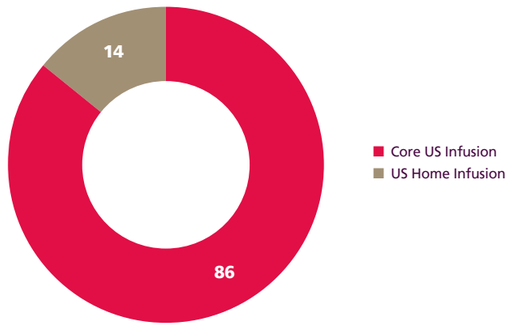
Lincare (owned by Linde since 2012) represents the market leader, although with a revenue share of less than 10% as part of a conglomerate and not an exclusive player. After the recent acquisition of **Apria** (by Owens & Minor) **AdaptHealth Corp** is the only exclusive home health equipment player left. It is a supplier of at-home solutions. Its major product areas include sleep therapy, diabetes, oxygen therapy, and other home equipment for patients discharged from acute care, as well as for chronically ill patients.

The list of exposed companies could be enhanced with the actual product producers, such as **Resmed** or Philips for sleep apnea. The latter company still has to deal with the troubles and potential liabilities of a major product recall in the sleep category. In general, the producers have less focus on home care equipment, and consequently, offer less exclusive exposure to the growing trend of home healthcare services.

3.3.6 Home infusion

In the USA, **the patient population for home infusion has tripled** in the past 10 years, to a base amounting to approx. 3m patients. Nevertheless, it still only accounts for only 14% of the quite sizeable infusion market, in the USA (Graph 16). Home infusion treatment is applicable for both acute conditions for patients discharged from acute care settings, as well as chronically-ill patients, who are often treated for many years.

Graph 16:
US infusion market size (USD 100bn):



Source: OptionCare Health company filings

OptionCare Health Inc. (OPCH) represents the market leading (>20% US market share) and only exclusive player entity. The next two major providers, Coram (owned by CVS Health) and Briova (owned by United Health Group) are vertically integrated. The top three combined claim a share of slightly above 54%, and the remainder is highly fragmented, which provides potential for further consolidation.

3.3.7 Tele-Medicine

Virtual care has been a hot and widely discussed topic for the past two years, since the pandemic acted as a key driving force for the accelerating adoption. The value proposition is quite compelling, especially when the cost of a phone or video call is compared to an emergency hospital visit. Most service platform providers have not been able to benefit monetarily from the rapid pick-up, which is related to the rapid commoditisation of certain offerings, as well as fixed PMPM (per member-per month) price settings, which need some time to adapt to structural (upticks) in overall online activity.

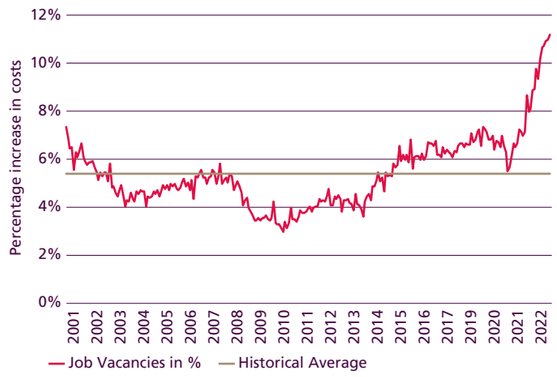
Market estimates are quite difficult to perform, as the potential for technological advancement, especially within data management, is huge. The potential for **tele-medicine as part of a home care setting appears more modest,** as home care is primarily a time-dependent unscalable personal service item. It is probably best suited to avoid unnecessary consultations and as such to save costs (bottom-line) from the perspective of the service manager or funder rather than to develop additional revenue (top-line) sources for service providers.

The application of RPM **(remote patient monitoring)** may prove to provide similar benefits to online consultations in terms of providing cost benefits and ensuring better outcomes and data management, as well as avoiding costly emergency procedures or less severe outcomes. In a nutshell, the limited resources of the healthcare system are less overburdened due to more timely medical interventions.

Public perception about overly successful **margin** levels, which could mean anything above 20% based on EBITDA levels, could be counterproductive.

High people intensity and reliance on sufficient labor supply accompany high sensitivity to both structural and cyclical **wage inflation.** The recent pandemic as well as a tight labour situation even before Covid triggered at least a temporary shortage in available healthcare staff, have put pressure on both the growth and margins of healthcare service providers including companies specialising in home care. Job vacancies have risen to long-term highs.

Graph 17:
Healthcare job vacancies as a percentage of toal healthcare industry jobs (US)



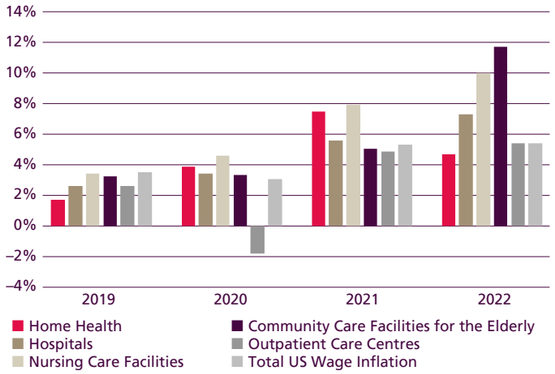
Source: Bureau of Labor Statistics

3.4. Risks

Pricing or sufficient and timely **reimbursement** plays a vital role for sufficient supply. Healthcare is widely perceived as a common good that should be made available to anybody in need in any economic or political system across the globe. As home healthcare services usually help to save costs for any healthcare system, this particular segment should have more political and regulatory support than hospitals or pharmaceuticals, even though there is continued pressure on pricing and efficiency improvements in this space.

Consequently, in the USA, wages have risen faster than before in most healthcare segments during the past two years. This trend is also valid relative to the total economy. Upside pressure from wages has recently decreased slightly, which goes along with lower numbers of temporary staff employed (Graph 18).

Graph 18:
Wage growth by healthcare system subsegments 2019–2022 (February yoy)



Source: Bureau of Labor Statistics

Labour supply constraints and, correspondingly, **wage inflation** have been weighing on profitability trends for home care and other service-oriented healthcare segments for the past two years. However, with a fading negative impact from both the pandemic and overall labour-related issues, and assuming updates of reimbursement rates to take account of labour cost increases, admittedly with a time lag, the fundamental environment for home care companies is set to improve. Political policy should also be supportive, aiming to provide a **stable reimbursement and regulatory environment.**

Quality and litigation risks

The case of Orpea, a leading listed commercial operator of nursing homes based in France, which has to deal with severe allegations about **service quality and abuses** in their nursing facilities, is an obvious sign of the importance of the quality of the services provided. Apart from a certain degree of subjectivity concerning the quality and fulfillment of service duties for the well-being of people, the healthcare industry faces significant potential liability in the event of misconduct or insufficient performance.

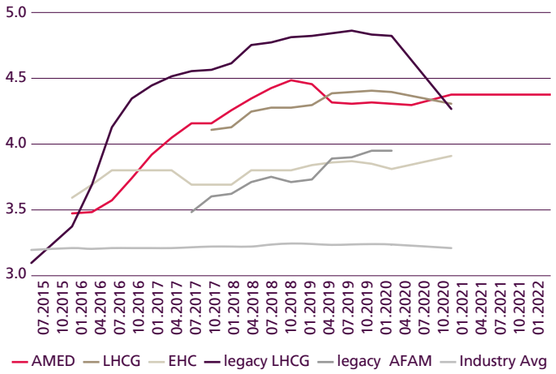
Home care services are as exposed to potential issues as any other healthcare segment. Measures to **monitor, improve and maintain good service quality** include continuous supervision and ranking systems. The home care patient tends to be more agile than the average nursing home inmate, and they should be better able to address potential problems and personal requirements. Nevertheless, mitigation of potential claims and misconduct, requires constant monitoring and management attention from any service provider.

In the long term, it is essential that companies provide **adequate service quality.** Service providers, whether privately managed or government institutions, need to optimise the relationship cost, quality, patient satisfaction and financial sourcing. It is impossible to maximise every factor at the same time. In more market-oriented healthcare markets, such as the US market, ranking systems and corresponding monetary rewards provide appropriate incentives for improvements in processes and actual outcomes.

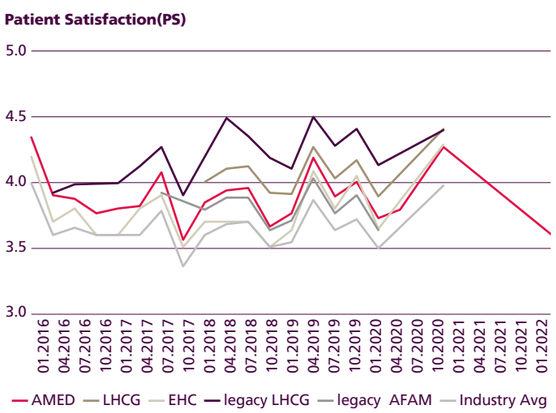
In the US, CMS (Centers for Medicare & Medicaid Services) introduced a **quality ranking system** (from 1 [=negative] to 5 [=positive] stars) in order to benchmark caregiving companies and provide better comparability. The rankings are manufactured from two different angles, i.e. from the service providers' (quality of patient care) as well as from the patient's side (patient satisfaction). **Assessment criteria** for the former include **both process-** (timely initiation, drug education, influenza immunisation) and **outcome-based measures** (improvements in ambulation, bed transferring, bathing, pain interference, and dyspnea [shortness of breath] as well as acute-care hospitalisation measures). The following graphs show both the absolute ranking levels of the leading companies and their development over time. Leading companies like Amedisys (AMED) and LHC (LHCG) have clearly demonstrated since inception (in 2015) that their quality rankings have been superior to the industry average. During the height of the pandemic crisis, the ranking systems were temporarily suspended.

Graph 19-20:
Star ratings (5=positive, 1=negative) 2015-2022

Quality of Patient Care (QPC)



Patient Satisfaction(PS)



Source: CMS, Company filings

The market forces the provider companies to continuously optimize their resource management. Inefficient players with poor quality rankings will be finally competed away. The home care industry as a whole has the specific advantage of usually offering the lowest cost option.

4 Conclusion and investment opportunities

– **Healthcare costs tend to grow faster than overall GDP** across developed nations, both per capita and in total. Main drivers include well-known factors such as ageing and increasing life expectancy.

– The **absolute cost burden** is particularly striking in the USA.

– Providing healthcare services at the home of the patient (home care) represents a relatively **low-cost option** compared to rehab and nursing facilities, and obviously long-term care hospitals.

– Home healthcare is **underpenetrated** in many countries, including the USA.

– Home healthcare promotes **well-being and more efficient use** of financial resources.

– Social aspects are the most pronounced from an **ESG** perspective in the healthcare services industry.

– Key **drivers** affecting the industry include labour supply and demand, the pandemic, government regulation and reimbursement schemes, and wage inflation.

– **Growth potential** is assessed at approx. +7% annually for the coming 5-10 years and by subsegment is most pronounced for skilled nursing, hospice care, non-skilled care and tele-medicine, although the latter from a much lower base.

– **Profit pools** are highest for skilled care, hospice care and home medical equipment.

– Earnings **leverage** for service industries tends to be capped, as is usual for service industries. Nevertheless, **size** is an important factor, especially for vertically integrated providers.

– The most pronounced **risks** include **reimbursement schemes (pricing), wage inflation, and quality and litigation.** In the USA, for instance, the latest proposals for Medicare annual pricing updates are negative, and do not match increases on the cost side.

– The negative impact of **pandemic and labour-cost related pressures** on profitability is declining and reimbursement changes are set to provide stability and, hence, a more favourable fundamental environment for the home care industry than in the most recent two years.

Pure-play investment opportunities or companies with at least some meaningful exposure in home care can mainly be found in the USA, similar to other specialised healthcare subsectors such as managed care or IT. Investable companies outside the USA have a core business in the nursing home facilities with some add-on into home care in the sense of a complementary, fully integrated service offering.

Table:
List of stocks with at least partial exposure to home healthcare and related services

Name	Domicile	GICS Sub Industry	NAU Reason	EV/ Sales	EV/ EBITDA	FCF Yield	Dividend yield	EV/IC	ROIC hist 5y avg	ROIC (2y fwd)	Equity/ Total Assets	Net Debt/ EBITDA	Current EBITDA margin (%)	Current Net Income	Current FCF	ESG Score	Sust Score	Sust Rating
Amedisys, Inc.	USA	Healthcare Services	SDG Leader	2.0	16.2	5.6%	0.0%	3.03	15.5%	15.4%	50%	1.8	12.5%	209	219	61.73	82.73	A
Encompass Health Corporation	USA	Healthcare Facilities	SDG Leader	1.9	9.0	3.3%	2.0%	1.70	9.9%	11.6%	28%	3.2	20.8%	410	187	72.92	81.32	A
DaVita Inc.	USA	Healthcare Services	SDG Leader	1.9	8.8	15.0%	0.0%	1.58	6.8%	9.1%	4%	4.7	21.1%	978	1292	73.17	79.73	A
Fresenius Medical Care AG & Co. KGaA	Germany	Healthcare Services	SDG Leader	1.6	7.7	11.2%	2.7%	1.02	6.5%	6.1%	37%	3.3	20.3%	1021	1723	77.78	79.35	A
Owens & Minor, Inc.	USA	Healthcare Distributors	SDG Leader	0.3	6.9	3.7%	0.0%	1.51	2.0%	15.9%	27%	2.3	5.0%	222	83	82.31	87.88	A
AdaptHealth Corp.	USA	Healthcare Distributors		1.9	7.8	4.1%	0.0%	1.06	-1.6%	7.1%	38%	3.7	24.5%	156	100	0.72	63.90	B
LHC Group, Inc.	USA	Healthcare Services	SDG Leader	2.6	22.9	-1.9%	0.0%	2.42	6.9%	9.3%	53%	3.0	11.5%	116	-96	82.67	88.83	A
Humana Inc.	USA	Managed Healthcare	SDG Leader	0.8	15.4	1.7%	0.7%	1.89	13.1%	11.0%	36%	2.2	5.3%	2933	946	80.49	85.79	A
UnitedHealth Group Incorporated	USA	Managed Healthcare	SDG Leader	1.7	17.7	4.7%	1.2%	2.97	12.2%	15.7%	33%	1.1	9.4%	17285	19889	70.73	81.39	A
Chemed Corporation	USA	Healthcare Services		3.3	17.6	3.7%	0.3%	7.14	25.6%	32.1%	43%	0.8	18.8%	269	250	25.27	72.19	A
Addus HomeCare Corporation	USA	Healthcare Services	SDG Leader	1.5	13.1	2.8%	0.0%	1.59	6.6%	8.6%	61%	0.9	11.8%	45	35	44.04	76.78	A
Option Care Health Inc	USA	Healthcare Services	SDG Leader	1.7	20.8	4.3%	0.0%	2.45	1.3%	12.1%	40%	3.8	8.0%	140	201	89.53	90.22	A
Aveanna Healthcare Holdings Inc	USA	Healthcare Services	SDG Leader	1.1	11.2	-2.3%	0.0%	0.91	-0.5%	7.6%	27%	8.3	10.0%	-117	-12	62.09	79.51	A
Orpea SA	France	Healthcare Facilities	SDG Leader	0.3	4.2			0.42	2.5%	11.8%			8.3%	69		98.39	86.98	A
Korian SA	France	Healthcare Facilities	SDG Leader	2.1	8.8	11.3%	2.3%	0.71	3.1%	3.0%	24%	6.9	23.4%	100	189	97.58	88.21	A
LNA Sante SA	France	Healthcare Facilities		1.8	10.4	12.9%	1.2%	0.97	3.2%	3.8%	14%	7.1	17.5%	25	54	1.61	59.80	C
Attendo AB	Sweden	Healthcare Facilities		1.3	8.6	34.7%	0.0%	0.91	3.0%	4.2%	23%	6.7	15.4%	6	122	41.94	75.17	A
Ambea AB	Sweden	Healthcare Facilities	SDG Leader	1.2	12.1	26.5%	2.6%	0.97	4.6%	6.6%	27%	8.5	10.1%	23	111	68.55	86.82	A
Ryman Healthcare Ltd.	New Zealand	Healthcare Facilities	SDG Leader	14.0	188.6	5.6%	2.5%	1.13	4.9%	6.4%	31%	68.3	7.4%	439	160	90.32	87.25	A
Summerset Group Holdings Limited	New Zealand	Healthcare Facilities	SDG Leader	14.5	189.9	14.4%	2.0%	0.61	9.1%	4.7%	39%	48.7	7.6%	345	198	96.77	90.19	A
Amvis Holdings.Inc.	Japan	Healthcare Facilities	SDG Leader	10.2	36.0	-1.8%	0.1%	5.41	13.0%	21.2%	51%	0.4	28.3%	19	-21	50.40	78.08	A

Sources: Factset, Swisscanto

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