



Sweden

Market study 2021

Matching Dutch Solutions to Nordic Challenges for Future-Proof Healthcare



EXECUTIVE SUMMARY

The Swedish healthcare system has public universalized healthcare access, with options for private coverage. The healthcare expenditure was in 2018 10.9% of its GDP.

Three levels of Swedish government are involved in the healthcare system in Sweden: the national level, the regional level, and the municipal level. The universal healthcare system is highly decentralized and nationally regulated but locally administrated by its 290 municipalities. The Swedish healthcare system is publicly financed with a limited private market. However, private providers are slowly growing, mainly in the field of elderly care and around the region of Stockholm.

One major challenge in Sweden in the past decade has been a shortage of specialized staff and especially nurses. The staff shortages have been identified as one of the greatest threats to the future of Swedish healthcare.

During the COVID-19 pandemic, the Swedish government did not impose a general lockdown unlike its neighbouring Nordic states. The spread of the virus caused for loss of life mainly in the elderly homes, who were understaffed. Also, communication on the level of the regions was a point of improvement.

Sweden is open for international collaboration and mediation, and universities, hospitals and the private sector are willing to cooperate with international researchers and the private sector. Sweden has strong centres for life science innovation in both Stockholm and Skåne region. Procurement in hospitals is largely based on directives of the EU.

Opportunities for Dutch companies are there in several subsectors. Hospitals in Sweden have become more specialized and centered, and are looking at solutions for outpatient treatment. Sustainability within the hospital is also a trend.

In the field of eHealth, Sweden knows innovative start-up applications that provide access to different forms of healthcare through mobile, artificial intelligence (AI) and other technologies. There is also a demand to increase the connectivity between healthcare institutions and levels in the country.

In the field of Biotech and Biopharma, the application and innovation of precision medicine is an opportunity. There are governmental funding opportunities for research on precision medicine.

Lastly, in the field of mobility and vitality, Sweden looks with interests towards the Netherlands and its solutions for elderly care, for example including innovative living spaces, solutions for staff shortage and preventive measures and its financing.

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I. TOP 10 REASONS – WHY SWEDEN IS INTERESTING FOR THE DUTCH LIFE SCIENCES AND HEALTH SECTOR

- **Hospitals of the future:** The landscape of hospital build and design in Sweden is rapidly changing, inpatient treatment is substituted by outpatient treatments and digital consults. There will only be single patient rooms in future hospitals. Major renovations are done to make hospitals centered and specialized. In December 2020, there were 65 ongoing hospital projects and 18 projects in long-term care. Solutions and companies offering them need to have a sustainability impact in order to be successful in tendering. Including your companies sustainability impact is a good selling point in the sector of hospital design and build and provides opportunities for Dutch companies [See Section 4.3.](#)
- **Precision healthcare:** In Sweden, the interest in precision medicine is growing and will transform healthcare significantly. This will alter the collaboration between public and private companies, as the former are less willing to invest in precision medicine. For example Vinnova, the Swedish government agency for financing innovation, has a initiative on funding sustainable precision health. [Section 4.4.](#)
- **Renowned for international collaboration and mediation:** Sweden is world-renown for international collaboration and mediation. As such, universities, hospitals, and the public sector are open and willing to collaborate with international researchers and the private sector. See [Section 4.4, 4.5 and 4.6.](#)
- **Innovative start-up applications:** Swedish startups are leading the way in the global development of digital healthcare, or health tech, by providing access to different forms of healthcare through mobile, artificial intelligence (AI) and other technologies. See [Section 4.2.](#)
- **Connectivity and interoperability:** Connected healthcare is one of the focus areas of digital health in Sweden. One of the challenges in the (digital) healthcare infrastructure of the country is the communication and collaboration between regions and municipalities. Inera is responsible for procuring national eHealth services to member organizations, making it easier for Dutch companies to enter the national eHealth market. See [Section 4.2.](#)
- **Health budgets are decentralized:** Decision making in Sweden is decentralized to the county councils. In each of the 21 county councils there are different opportunities to showcase specialized Dutch solutions to meet the needs of individual counties. See [Section 2.2 and Chapter 3.](#)
- **COVID-19 related changes:** During the pandemic, the shortcomings and excellences of the Swedish healthcare system have become visible. Communication between the regions is a point of improvement that has been shed light on during the pandemic, but overall trust in the system has increased. There has been a renewed conversation on the quality of life, especially that of the elderly, that provides for new impulses in the sector. Also, there is tried to work less in silos by adopting more innovative working routines at hospitals and interacting care facilities.
- **Privatization in elderly care:** Especially in the Stockholm area, private parties are increasingly becoming involved in the provision of elderly care. Services are outsourced to private parties in publicly-owned facilities. Sweden looks with interests towards the Netherlands and its solutions for elderly care, including innovative living spaces, solutions for staff shortage and preventive measures. See [Section 4.1.](#)
- **Research: Access to Data:** Sweden has over 100 national health registers and biobanks that provide population-wide health data. Swedish registers can be linked to other national registries, such as school performance or criminal records, to create unique epidemiological studies. See [Section 4.5.](#)
- **Sweden as a stepping stone to other international markets:** Sweden has strong centres for life science innovation in both Stockholm and Skåne region. In Stockholm region, there are over 650 companies working in the life science sector. Medicon Valley, spanning the Greater Copenhagen region of eastern Denmark and southern Sweden, is also an international leading hub for the LSH sector. These life science centres provide opportunities to enter a global market attracting multinational investors. See [Section 4.4.](#)

II. SNAPSHOT: SWEDEN COMPARED TO DENMARK AND NORWAY

Sweden, Denmark and Norway are similar in many ways, including shared cultures, similar languages, and societal structures based on a welfare state. To understand the nuanced differences between these Scandinavian countries, this section provides a comparative snapshot of the healthcare markets and opportunities. To learn more on communication in this region, review the [document](#) provided by the Embassies of the Netherlands in the Nordics.

What Makes Sweden Different? In both land area and population, Sweden is the largest of the three countries. The opportunities this presents are two-fold. First, the larger population entails a larger healthcare sector and market, as shown in **Table 1**. Second, like Norway, the dispersed population presents an increased demand for telemedicine, self-monitoring and eHealth solutions, especially in northern Sweden.

Unlike Denmark and Norway, the Swedish healthcare sector is decentralized. With 21 regions and 290 municipalities, the decentralized structure presents both challenges and opportunities. While it may be difficult to obtain larger contracts for medical supplies, there are more specialized niches and needs to address in the different municipalities. Decision-making in Sweden is based on consensus and decisions are taken on the different levels of governance. Unlike Denmark where there is a centralized hospital plan, the 21 Swedish regions are responsible for their own hospital plans. This entails that there are continuous and ongoing hospital construction projects throughout Sweden.

Unique Opportunities in Sweden: Of the three countries, Sweden has the lowest number of hospital beds with 2.1 beds per 100,000 people. This highlights Sweden's emphasis on quickly transitioning people from hospital care to home care or rehabilitation. Sweden is making its hospitals future-proof, which entails the number of beds for inpatient treatment will decrease, digital outpatient visits will increase and hospitals will become more sustainable. In this, there are significant opportunities in Swedish municipalities for Dutch smart solutions that help in these transitions. Like Norway, the Swedish healthcare market can be driven through bottom-up demand from consumers. However, evidence-based solutions are very important. Therefore, Dutch companies should collaborate with Swedish universities and municipalities to conduct research and pilot solutions in a Swedish setting. To drive forward innovative research, Dutch companies and researchers can make use of the unique National Quality Health Registers that encompass the entire Swedish population.

The Clichés (are always true): All three Nordic countries are eager to adopt new innovative solutions and share sophisticated ecosystems for research and innovation. Municipalities are willing to act as test beds for pilot projects and universities in the Nordics are strong international collaborators. The life science sector in Sweden is significant and diverse, which is mainly clustered in the areas of Stockholm/Uppsala, Gothenburg, the Skåne region, Umeå and Karlskoga-Örebro. Rather than competing with these structures, Dutch companies should consider building partnerships, fostering collaborations, and seeking guidance from organizations such as Business Sweden, Invest Stockholm, Business Region Göteborg, Swecare or Invest in Skåne. As with Denmark and Norway, Dutch companies looking to enter Sweden should establish a long-term strategy, network with local partners, master the language, and understand the business culture. With a



relatively large market with a strong reputation, Sweden can be approached as a launching pad onto global healthcare markets.

COVID-19: The Scandinavian response to COVID-19 has revealed two differing approaches. Denmark and Norway decided to take preventive measures at a very early stage to stop the virus from spreading in their countries. Sweden, on the other hand, took a much less restrictive approach and did not impose widespread lockdown measures on the population nor closed shops and public places. The pandemic accelerated changes in the Swedish health system; there has been a force to work less in silos and to adopt new and more innovative working routines that include different layers of the healthcare system, e.g., municipalities and regions, and hospitals and elderly care facilities. Digitalization of healthcare has accelerated in general, although at a slower rate than most Nordic countries.

III. COUNTRY COMPARISON

	Denmark	Norway	Sweden	Netherlands
Land Size (km ²) (2018)	40,000	365,107.8	407,310	33,670
Population (2019)	5,818,553	5,347,896	10,285,453	17,332,850
<i>annual growth (%) (2019)</i>	0.4	0.7	1.1	0.6
Population density (people per sq. km of land) (2018)	145	15	25	512
65 years and older (%) (2019)	20	17	20	20
<i>expected in 2050 (%)</i>	24.4	23.6	24.4	27.7
Maternal Mortality Rate (per 100 000 births) (2016)	3	3	3	3
Life Expectancy at Birth (2018)	81	83	83	82
Healthy Life Expectancy (years, 2019)	71.0	71.4	71.9	71.4
<i>Probability of dying between 15-60 years (per 1,000) (2017)</i>	71	58	54	58
Life Expectancy Global Rank	34	13	17	25
Economic Context				
GDP total (2019, USD millions)	350,104	403,336	530,884	907,051
<i>annual growth rate (%) (2019)</i>	2.8	1.2	1.3	1.7

GDP per capita (2020. USD)	60,413	63,293	54,848	59,335
<i>projected growth rate (%) (2022)</i>	2.9	3.7	2.4	3.7
(Health) Business Context				
Ease of Doing Business Rank (2019)	4	9	10	42
Projected pharmaceutical Market 2021 (USD mln)	3.1	3,190	4,950	6,660
<i>expected annual growth 2016-2021 in USD (%)</i>	0.4	2.9	3.0	0.2
Projected Medical Device Market 2020 (USD mln)	1,674.6	1,593.6	2,836.3	3,952.1
<i>expected annual growth 2016-2021 in USD (%)</i>	2.9	4.5	4.5	2.8
Medical Device Import from the Netherlands (2019. USD millions)	493	84	775	-
Medical Device Export to the Netherlands (2019, USD millions)	117	88	367	-
Health System				
Type of Health System	Public decentralized UHC system with private options	Public decentralized UHC system with private options	Public decentralized UHC system with private options	Dual-level system with universal social health insurance
HAQ-score (2016)	92.1	96.6	95.5	96.1
Total Health Expenditure (2020, billion euros)				82.2
Health Expenditure % of GDP (2018)	10.07	10.05	10.90	9.97
<i>per Capita (USD) (2018)</i>	6,216.77	8,239.10	5,981.71	5,306.53

Private health expenditure as % of total HE (2018)	16.12	14.68	14.91	35.06
Out-of-pocket expenditure as % of total HE (2018)	13.77	14.31	13.78	10.80
Domestic general government as % of total HE (2018)	83.88	85.32	85.09	64.92
Hospital beds per 1 000 population (2018)	2.4	3.5	2.1	3.2
Physicians per 1 000 population (2016)	4.0	2.7	4.0	3.5
Nurses and Midwives per 1 000 (2016)	10.3	18.0	11.8	10.9
Responsible entity for specialized care	Regions	Regions	Regions	
Responsible entity for primary care	Municipalities	Municipalities	Regions	
Responsible entity for long-term care	Municipalities	Municipalities	Municipalities	

Table 1. Country Comparison. Accumulated data from: World Bank, BMI Medical Devices reports (2017), UN Comtrade Data, OECD Health at a Glance 2017 Report

IV. GLOSSARY OF TERMS

EU	European Union
GDP	Gross Domestic Product
SME	Small and Medium Enterprises
TFHC	Task Force Health Care
LSH	Life Sciences and Health
RBD	Regional Business Development team, Nordic and Baltic countries

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1. INTRODUCTION

1.1. An Introduction to Sweden

The Kingdom of Sweden is a high income country in Northern Europe. Sweden is a constitutional monarchy with a parliamentary democracy. The prime minister is the executive authority. Members of parliament are elected every four years through proportional representation. The market economy is driven by exports of cars, packaged medicaments, refined petroleum, vehicle parts and broadcasting equipment and mainly exports to Germany, Norway, the USA, Denmark and Finland (OEC, 2021).

The population of Sweden was over 10.4 million in 2021 (Statistics Sweden, 2021). The population distribution from 2019 is shown in **Figure 1. Fout! Verwijzingsbron niet gevonden.** presents the population statistics for Sweden, Denmark, and Norway. Over 20% of the population is older than 65 years of age (Statistics Sweden, 2021). The total fertility rate in Sweden is 1.66 children per woman (Statistics Sweden, 2020). In 2016, Sweden faced the largest population increase since 1861 with over 140,000 additional people (Statistics Sweden, 2017). The population increase was primarily due to a large influx of immigrants and asylum seekers (over 136,000 people immigrated to Sweden in 2015; over 160,000 people immigrated in 2016) (Statistics Sweden, 2020). In 2020, during the COVID-19 pandemic, immigration rates declined by 29%.

Life expectancy at birth for men is 80.6 years on average in 2020. Life expectancy at birth for women is 84.29 years on average in 2020. (Statistics Sweden, 2021). Life expectancy decreased due to the excess mortality in light of the COVID-19 pandemic.

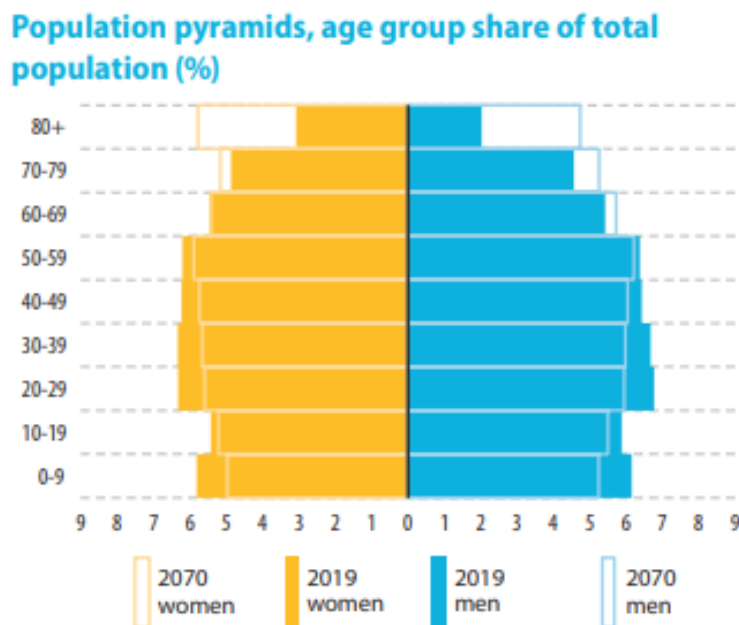


Figure 1. Population distribution of Sweden in 2019 and 2070 predictions (eurostat, 2019)

	Denmark	Norway	Sweden
Total Population, 2019	5,818,553	5,347,896	10,285,453
Population growth (annual %) 2019	0.4	0.7	1.1
Population density (people per sq. km of land area)	145	15	25
Population ages 0-14 (% of total) 2019	16	17	18
Population ages 15-64 (% of total) 2019	64	65	62
Population age 65 and above (% of total) 2019	20	17	20
Urban population (% of total) 2019	88	83	88

Table 2. Population statistics for Denmark, Sweden and Norway (The World Bank, 2019)

1.2. About this study

This report was prepared by Task Force Health Care (TFHC) for the Regional Business Development team (RBD) for the Nordic and Baltic countries on behalf of the Netherlands Enterprise Agency and the Ministry of Foreign Affairs. The report is an updated version of the study published in 2017 by TFHC on the LSH sector in Sweden and reflects the current reality, including the effect of COVID-19 and the scientific insights obtained from the pandemic. This report highlights priorities, opportunities, and challenges of the Swedish healthcare market. In addition, the study provides information on trends, financial considerations, and practical information for companies interested in the Swedish market.

Parallel to this updated report for Sweden, similar updates of the 2017 reports have been completed for Denmark and Norway. The snapshot included in this report gives a brief overview and comparison of the healthcare sector in all three countries. The complete reports for Denmark and Norway are also available upon request.

1.3. Methodology

In order to make this report as complete and relevant as possible for the Dutch Life Sciences & Health sector, information was obtained through different sources including desk study and expert interviews. This methodology was applied for every updated report, i.e. for Norway, Denmark and Sweden.

Desk research

The study uses secondary data including government documents, reports, and academic articles. For the statistics mentioned in the report, the latest available data have been used. The information obtained through this desk research was validated at the meetings during the expert interviews.

Expert interviews

Due to the situation regarding travel restrictions and the COVID-19 pandemic at the time of preparing this report, in person meetings were not possible. Instead expert interviews were conducted to gather valuable information. The meetings were used to cross check previously obtained data to provide a report that is as objective and realistic as possible.

2. THE SWEDISH HEALTHCARE SECTOR

The following chapter will describe the historical background of the Swedish health care sector and elaborate on the health care system and its financing and expenditure. Afterwards, it draws attention to the healthcare infrastructure in Sweden, including its professional workforce and health outcomes. Conclusively, it discusses how Sweden dealt with the COVID-19 pandemic and the results thereof.

2.1. Historical Background

The current structure of Swedish healthcare is a result of continuous historical developments in ownership, local self-governance, and public financing that have been developed in Sweden since the 1600s (Anell, Glenngård, & Merkur, 2012). Historical developments of the 20th century shifted the focus of the healthcare sector to the hospitals. In the 1920s, responsibility for inpatient hospital care was shifted to the county councils (Anell, Glenngård, & Merkur, 2012). By the 1960s, nearly 80% of physicians worked in hospitals (Anell et al.). Concerns grew on the national level about the dominant role of hospital care and weak outpatient services (Anell, Glenngård, & Merkur, 2012). According to Health Systems in Transition:

“Hospital physicians were in practice responsible for most outpatient services and were paid directly by patients according to a fee-for-service scheme. Thus hospital physicians had strong economic incentives to provide private outpatient services and were able to use facilities at the public hospitals for this purpose. Employment at the hospital and responsibilities of county councils only covered inpatient services. Patients had to pay the entire cost of consultations out-of-pocket, and were then reimbursed by the national health insurance”. (p.21)

Reforms in the 1970s shifted responsibility for outpatient services to the county councils (Anell, Glenngård, & Merkur, 2012). With these reforms, physicians were employed with fixed salaries and patients paid fixed co-payments for outpatient services (Anell, Glenngård, & Merkur, 2012). The reforms of the 1970s reflected the beliefs that service improvements would come with public ownership (Anell, Glenngård, & Merkur, 2012). By the late 1970s, the county councils were responsible for most health care services and by the early 1980s, county councils came to own the Karolinska University Hospital and Uppsala University Hospital (Anell, Glenngård, & Merkur, 2012). The 1982 Health and Medical Services Act introduced universal healthcare coverage (The Commonwealth Fund, 2020). The county councils also became responsible for payments to private practitioners and prescription drug expenditures. In this regard, county councils had economic incentives to control costs (Anell, Glenngård, & Merkur, 2012).

In the 1980s, the county councils were overwhelmed with healthcare responsibilities. One contributing factor was the care practice known as *Långvården*. *Långvården* consisted of the inpatient care of elderly for the final three or four years of life. Individuals were lined up in the corridors in care facilities. A limited number of staff were caring for an overwhelming number of bedridden patients.

Policy initiatives in the 1990s abolished *Långvården* and aimed to address the overburden of the county councils. The 1992 Ädel reforms aimed to transfer responsibilities from the county councils to the municipalities (Anell, Glenngård, & Merkur, 2012). Long term inpatient care, elderly care, care for the physically disabled, and psychiatric care was shifted to the municipalities. With these shifting responsibilities, one fifth of the county councils' health care expenditures were transferred to the municipalities (Anell, Glenngård, & Merkur, 2012). The Ädel reforms left a long lasting legacy in Swedish healthcare.

With an ageing population, there is a demand to shift hospital or nursing home care to primary care institutions and home care. It is promoted to provide elderly care closer to the patient, both geographically and personally. The number of beds in residential long term care facilities have been reduced for a longer period of time in the country, in 2005 there were 88.4 beds per 1000 population aged 65 years and older, against 68.1 beds in 2019 (OECD, 2021).

In 2009 pharmacies, which were previously state owned, were privatized. Since privatization, the number of pharmacies throughout Sweden has increased by more than 20% (Anell, Glenngård, & Merkur, 2012). Since 2010, all citizens are guaranteed the choice of primary care provider. The law is known as LOV: *Lag om valfrihetssystem* (English: *Law of Freedom of Choice*). Residents choose care provider regardless of geographic location of the provider¹ (Anell, Glenngård, & Merkur, 2012). The same legislation also opened the establishment of primary care facilities operated by private care providers (Anell, Glenngård, & Merkur, 2012).

The Swedish healthcare sector is evaluated by standardized performance indicators throughout the county councils and at the national level (Anell, Glenngård, & Merkur, 2012). Transparency, comparative indicators, and evidence are vital components driving the development of and the research in the healthcare sector in Sweden. Annually, the Swedish government publishes open comparison indicators ([Öppna jämförelser](#)) on public health, primary care, long term care, and specialized care. The open comparison reports include overall 869 indicators, such as surgical waiting times, quality of care, and cost effectiveness measures. The indicators are meant to stimulate systematic improvements in county councils and the municipalities. They also make healthcare quality transparent. Annual patient surveys rate care providers, further driving improvement forward.

2.2. The Swedish Healthcare System

The Swedish healthcare system is based on three primary principles (Anell, Glenngård, & Merkur, 2012; The Commonwealth Fund, 2020). The principle of *Human dignity* entails that all humans have equal rights and equal entitlement to dignity in care. The second principle is *Need and solidarity* which entails that those in greatest need take precedence in care and treatment. The final principle is *Cost effectiveness* which aims to find a balance between costs and benefits of different types of care.

Three levels of Swedish government are involved in the healthcare system in Sweden: the national level, the regional level, and the municipal level. The universal healthcare system is highly decentralized and nationally regulated but locally administrated. Only the regional level and municipal level are responsible for the direct healthcare delivery, the state distributes resources across the country, and regulates and monitors the system (Optimity Advisors, 2018). **Figure 2** presents an overview of the healthcare system in Sweden followed by an explanation of the levels.

The Ministry of Health and Social Affairs ('The Ministry') ([Socialdepartementet](#)) is responsible for issues concerning health and the welfare of society. It makes the overall health care policy and regulation and sets budgets for government agencies and grants to regions, working in concert with 8 national government agencies. These responsibilities include healthcare, social insurance and insurance schemes, public health, rights of children, and rights of people with disabilities. The Ministry works with policy and budgets for the division of Families and Social Services, Gender Equality, Public Health and Health Care, and the Social Insurance Division (The Ministry of Health and Social Affairs, 2021). There are eight government agencies

¹ Due to higher demand for primary care services, other guidelines apply to residents in more urbanized counties.

directly under the Ministry, the newest of which is the Swedish eHealth Agency. An overview of the responsibilities of each agency is outlined in [Appendix A](#).

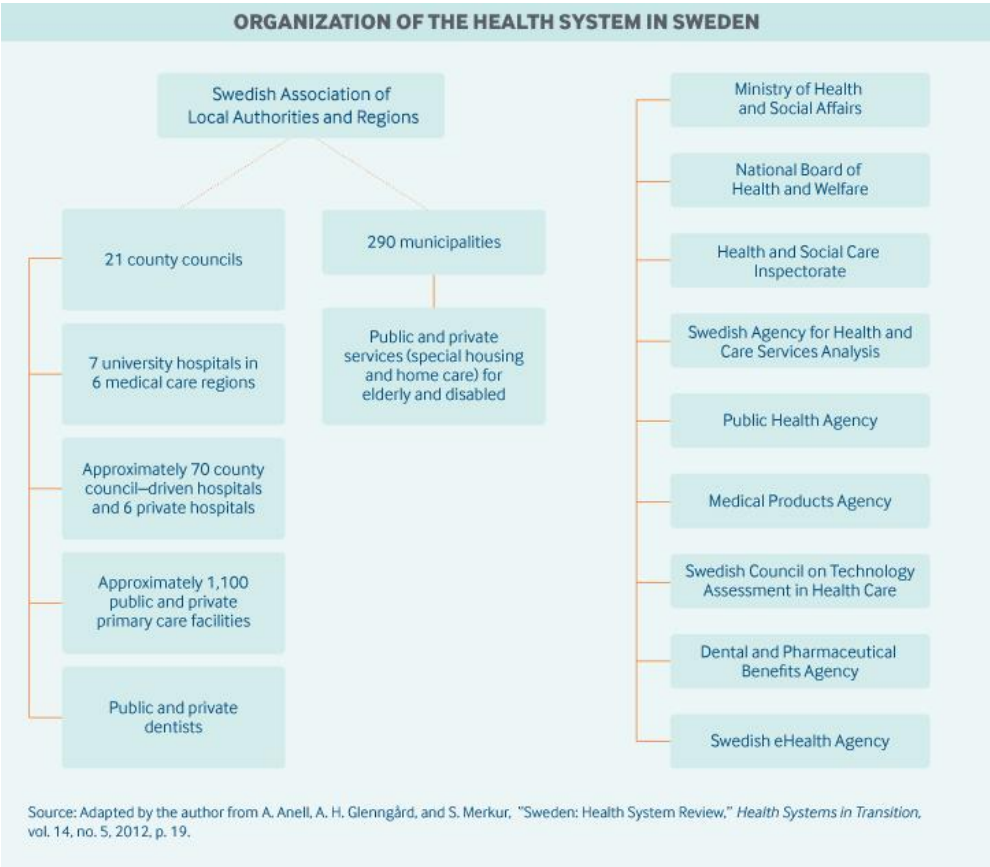


Figure 2. Overview of the Swedish Healthcare System (The Commonwealth Fund, 2020)

The National Board of Health and Welfare ([Socialstyrelsen](#)) ('The Board') is the largest national agency. The Board supervises and licenses all health care personnel, disseminates information, develops norms and standards for medical care (e.g., national guidelines for specific therapeutic areas), and, through data collection and analysis, ensures that those norms and standards are met. The agency also maintains health data registries and official statistics. As mentioned, Sweden has a long history of collecting health statistics on citizens. All health registers and official vital statistics on healthcare are maintained by the Board (Anell, Glenngård, & Merkur, 2012).

On the regional level, 21 county councils finance and deliver healthcare services to citizens (The Commonwealth Fund, 2020). County councils are responsible for both primary care and specialized care and these regions need to finance and deliver health services to its residents. Since 2019, regional councils cover dental care costs for local residents up to the age of 23. Dental care from the age of 24 is subsidized by the state **Figure 3** depicts the county councils on the map of Sweden. The county councils are responsible for over 1,100 primary health care centers. On average, a primary care facility is responsible for 9,000 patients (Bilby, Brehmer, Jacobsson, Riby, & Widen, 2015). Most primary care practices are team-based and patients have the



Figure 3. Regional divisions of county councils in Sweden

right to choose which facility they visit. There are some private primary care clinics, but the majority of facilities is publicly run (Swecare, 2021). The private providers obtain public funding to deliver primary care services. Two of the largest private healthcare providers in Sweden are [Capio](#) and [Aleris](#).

Over the decades, Sweden has developed a primary care system that aims to prevent an overburden on specialized care clinics (Bilby, Brehmer, Jacobsson, Riby, & Widen, 2015). Swedish primary care acts as a gatekeeper to specialized care, much like in the rest of Europe. Primary care physicians treat and diagnose around 80% of all patients that enter the primary care system. Most physicians and nurses working in primary care are specialized in general medicine (Bilby, Brehmer, Jacobsson, Riby, & Widen, 2015). The primary care system intends to provide services from cradle to the grave, acting as a person's first point of contact with the healthcare system.

Primary care nurses and physicians cannot treat or diagnose everyone. When specialized hospital treatment is required, patients are referred to the (specialized) hospitals. Like primary care, hospitals are run by each county council in Sweden. There were around 70 community hospitals Sweden in 2021 (Sveriges Kommuner och Regioner, 2021). About two thirds of county hospitals offer emergency services. There are 7 university hospitals in Sweden responsible for providing highly specialized care and driving research in health (Swecare, 2021). The university hospitals all provide emergency services. There are also 6 private hospitals, of which 3 are not for profit. A list of the geographic spread of university hospitals can be found in [Appendix B](#).

On the local level, 290 municipalities are responsible for long term care for psychiatric patients and the elderly, home services, psychiatric patients and disability care (The Commonwealth Fund, 2020). These services are performed by

both public and private providers. Upon referral from a social worker in the municipality, elderly adults and disabled people incur a separate maximum co-payment for services commissioned by the municipalities, which was SEK 1,772 (USD 194) per month in 2016 (The Commonwealth Fund, 2020). Home help services may include cleaning, food preparation, or social activities. Care services may include personal hygiene care like helping an individual in the shower.

At the national level, local and regional authorities are represented by the Swedish Association of Local Authorities and Regions (SALAR) ([Sveriges Kommuner och Landsting](#)). All municipalities, county councils, and regions are members of SALAR. SALAR promotes the role of local authorities on the national level and providing expert advice to authorities. In addition, SALAR is one of the largest employers in Sweden with over one million employees (SALAR, 2021). The Swedish Association acts as a central cluster organization. Their role is to gather the local authorities, to transfer knowledge, and to coordinate activities.

2.3. Healthcare Expenditure and Financing

Health expenditure in Sweden accounts for 10.9% of the GDP (World Bank, 2021). Since 1995, health expenditure as a share of GDP has increased in Sweden (Anell, Glenngård, & Merkur, 2012). The largest increase in health spending occurred between 2010 and 2011 when per capita health spending increased by more than 2% (World Bank, 2021). **Table 3** shows the Swedish healthcare expenditure in 2018 (World Bank, 2021). The private healthcare share of healthcare spending in Sweden is limited, but has seen growth in the past decade. The private healthcare sector is fully integrated in the public system, and is also publicly financed. Reimbursement in the public and private system follow the same way. **Figure 4** shows the insurance coverage and the amount of private supplementary coverages. Funding for care comes primarily from regional- and municipal-level taxes. Grants are also provided by the central government (The Commonwealth Fund, 2020).

	Denmark	Norway	Sweden
Total Healthcare Expenditure per capita (USD) 2018	6,216.77	8,239.10	5,981.71
Total Healthcare Expenditure (% of GDP) 2018	10.07	10.05	10.90
Domestic general government expenditure on health (% of total HE) 2018	83.88	85.32	85.09
Private expenditure on health (% of total HE) 2018	16.12	14.68	13.78
Out-of-pocket payments (% of total HE) 2018	13.77	14.31	13.78

Table 3. Danish, Norwegian and Swedish healthcare expenditure, 2018 (The World Bank, 2019)

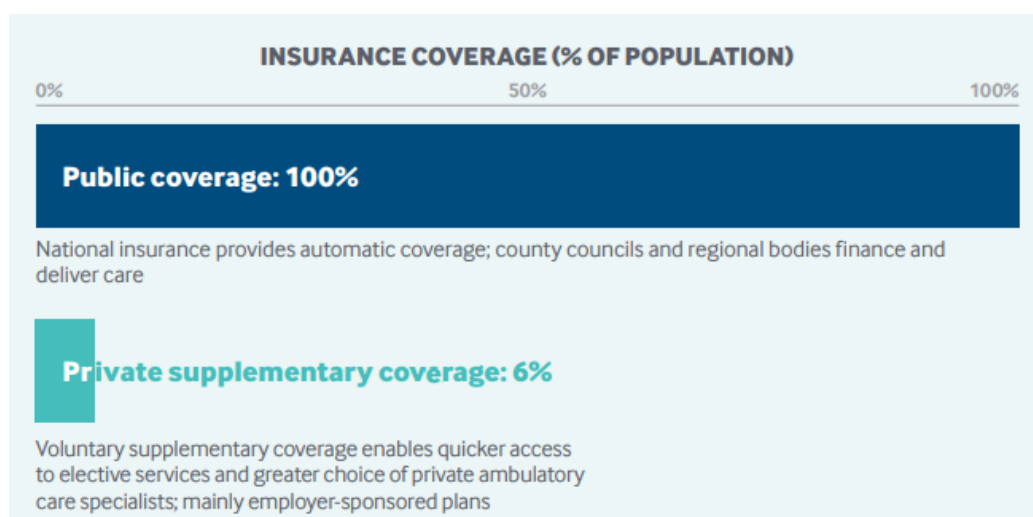


Figure 4. Insurance coverage of the Swedish population (The Commonwealth Fund, 2020)

The Swedish healthcare system is publicly financed with a limited private market. **Figure 5** presents a schematic overview of the financial flows in the Swedish healthcare system. Most financing originates from county council taxes and municipality taxes, with some contributions from the national government through targeted stimulus programs. About 84 percent of the health care spending was publicly financed, with regions' expenditures amounting to almost 57 percent, municipalities' up to 25 percent, and the central government's to almost 2 percent in 2016. 88 percent of regions' total spending was on health care. The regions and the municipalities levy proportional income taxes on their populations to help cover health care services. In 2016, 70 percent of the regions' total revenues came from local taxes and 16 percent from subsidies and national government grants, which are financed by national income taxes and indirect taxes. General government grants are designed to redistribute resources among municipalities and regions based on need. Targeted government grants finance specific initiatives, such as reducing waiting times (The Commonwealth Fund, 2020).

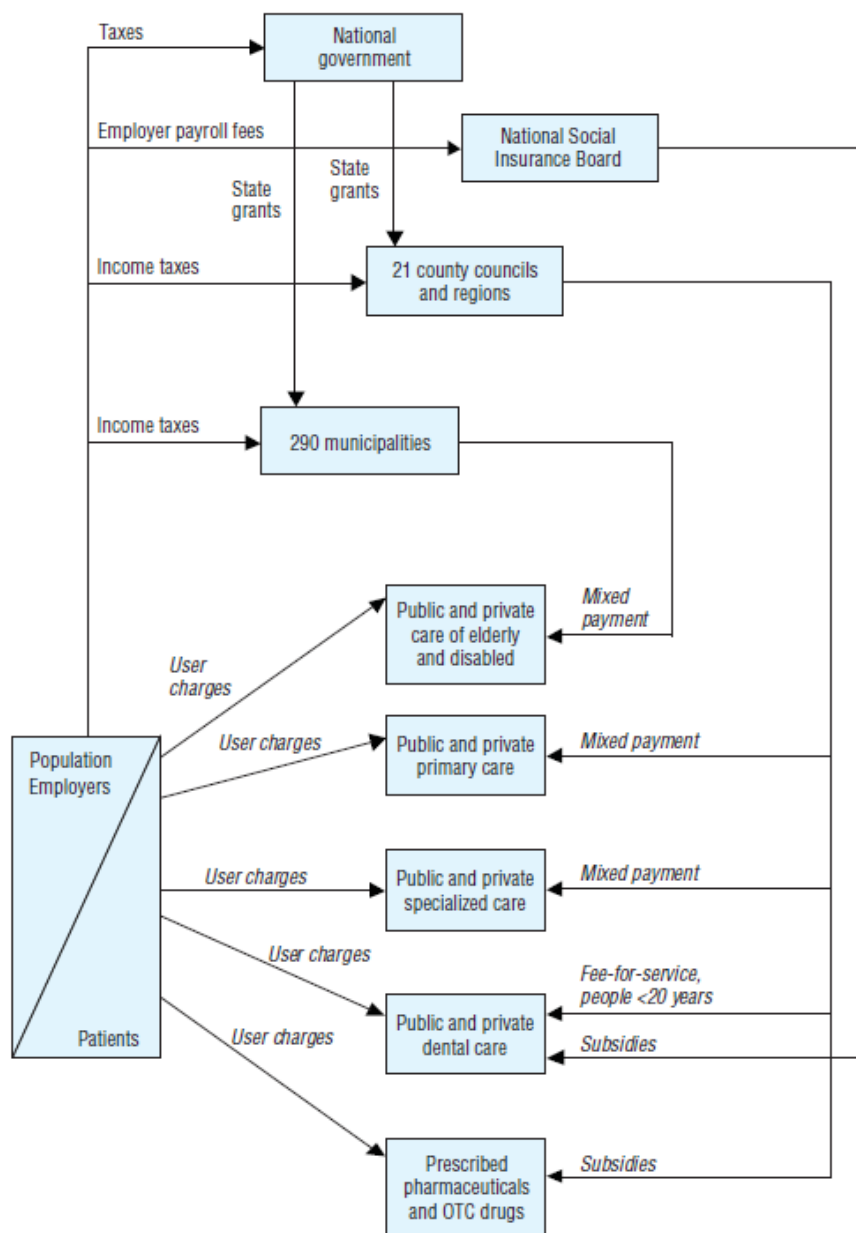


Figure 5. Financial flows of healthcare in Sweden

Private sector in the regions

The availability of private healthcare providers differs per region in Sweden. Political decisions in the regions decide if there are more private providers available in a region or not. For example, in South Stockholm there are mostly private providers of elderly care. In this region, also publicly owned facilities outsource their tasks to private parties. Although the number of private companies in elderly care is growing, they face some constraints due to complicated reimbursements per patient. A business model for private care facilities is complex to develop.

The organization of private providers relies on ideological aspects and the political majority in the region. In Stockholm, the presence of private providers is politically accepted.

Aside from public sources, the healthcare sector is financed by out-of-pocket fees. In 2018, out-of-pocket spending accounted for 13.8% of total healthcare expenditure in Sweden (World Bank, 2021). In Denmark and Norway, out-of-pocket healthcare fees are the same across the entire country (NOMESCO, 2015). However, in Sweden the county councils determine the healthcare fees for different types of visits and treatments (NOMESCO, 2015). Thus, out-of-pocket fees vary from county to county. A cost ceiling caps out-of-pocket costs for individuals. Figure x shows the typical patient copayments and the maximum out-of-pocket-costs per year.

TYPICAL PATIENT COPAYMENTS AND SAFETY NETS		
SERVICE	FEES PER ENCOUNTER/SERVICE ⁷	MAXIMUM OUT-OF-POCKET COSTS PER YEAR (SAFETY NET)
Primary care visit	SEK 150–300 (USD 16–33)*	
Specialist consultation	SEK 200–400 (USD 22–44) without referral from primary care SEK 0–400 (USD 0–33) with referral from primary care	Maximum out-of-pocket for health care visits: SEK 1,100 (USD 120)
Hospitalization (per day or visit) including pharmaceuticals	SEK 50–100 (USD 5.5–11.0) per day (adults)	Exempt from copayments for outpatient visits: children/youth under age 20 and adults over age 85
Prescription drugs (outpatient)	Drugs covered by National Drug Benefits Scheme: Individuals pay full cost up to annual maximum of SEK 1,125 (USD 123), after which subsidy gradually increases to 100% Prescription drugs and medical products not reimbursed under the National Drug Benefits Scheme: Patients pay full price	Maximum out-of-pocket for outpatient drugs: SEK 2,250 (USD 246); children under age 18 exempt from copayments
Dental Care	Adults receive fixed annual subsidies of SEK 300–600 (USD 33–66) to help pay for preventive dental care, depending on age	Free dental care for children/youth under age 23 No cap on adult user charges for dental care

Source: SALAR (Swedish Association of Local Authorities and Regions), Patientavgifter i öppen hälso- och sjukvård år 2018.

*One region (Sörmland) does not charge for primary care visits.

Figure 6. Patient copayment services and corresponding safety net for healthcare in Sweden (The Commonwealth Fund, 2016)

In 2016, a government inquiry by Swedish politician Ilmar Reepalu recommended limiting profits for private companies operating in the tax funded welfare sector. The plan proposed a maximum of 7% annual profits for private healthcare providers. In January 2019, a four party agreement stated that the proposed profit cap should not be implemented. The issue of profit in the Swedish welfare sector seems now, after years of heated discussions, to have been resolved (Schön, 2019).

2.4. Healthcare Infrastructure

Throughout Sweden there are over 1,100 primary care facilities. In 2020, there were around 70 community hospitals and 7 university medical centers. There were 6 private hospitals, three are for-profit and the three are non-for-profit (The Commonwealth Fund, 2020). Common practice for privately owned and managed hospitals is to enter contractual agreements with the county council. In this way, private facilities provide certain treatments and procedures to individuals with subsidies from the county council. Elective procedures or procedures that are not subsidized are paid in full by individuals.

Trend: reduction of hospital beds per 1,000 inhabitants

In Sweden, reforms have focused on developing home-based care, and shifting inpatient care to outpatient settings. Health care facilities that are sustainable for a future (elderly) population are being developed. Numbers of beds are being reduced, which is a big contrast to developing nations. Also the digital consults and home monitoring and direct exchange of patient’s data with their physician accelerates the reduction of hospital beds. In addition, there are only single patient rooms developed in the hospitals nowadays. The trend of reduction of hospital beds shows how healthcare is increasingly provided local, as close to the patient as possible.

	2000	2005	2010	2015	2018
Total number of hospital beds per 1.000 people	3.58	2.39	2.73	2.44	2.10

Table 4. Total number of hospital beds per 1,000 people in Sweden, 2000-2018 (World Bank, 2019)

The county councils also operate the seven university hospitals in Sweden. University hospitals are generally larger hospitals that provide the most specialized care in Sweden. A university hospital is also defined by close collaboration in research with a nearby university. A list of university hospitals and a map of where they are located are presented in [Appendix B](#). The most notable university hospital is the [Karolinska Universitetssjukhuset](#) in Solna, Stockholm, that ranks 8th in the world’s best smart hospitals, and 1st for a non-USA hospital (Freedman, 2021).

In 2019, Sweden had 2.1 hospital beds available per 1,000 inhabitants, as shown in **Table 4**. This was among the lowest numbers of OECD countries, and lower than Denmark with 2.6 and Norway with 3.5 beds (OECD, 2020). The number of hospital beds in the country is declining over the past decades. The textbox above provides more information on this. **Table 5** presents the distribution of beds, hospitals and surgical capacity across the different regions of Sweden. The table analyzes the capacity of Swedish hospitals for emergency care, conducted during the pandemic. Regional differences apply, but given population density and infrastructure, these are to explained well (Blimark et al., 2020).

Figure 7 shows a map of the hospital and long term care projects that are currently implemented in Sweden. As of December 2020, there were 18 long term care infrastructure projects ongoing, which were mainly new construction projects in the region of Stockholm. This number included initiated projects, projects under construction or newly opened facilities. The total value of the long term care projects was 284 million euros. There were 65 hospital projects ongoing, that included redevelopments of hospitals, but also new constructions. The total value of the hospital projects was 4.4 billion euros. A recent development in the sector of hospital build is the construction and fit out of sustainable hospitals. More information on hospital building projects and sustainability can be found in [Section 4.3](#).

Region (University cities)	Hospitals	Population	Area km ²	Population density per km ²	Surgical teams after 8 h	Surgical theatres	ICU beds	Surgical teams after 8 h per 100 k	Surgical theatres per 100 k	ICU beds per 100 k
West (Gothenburg)	9	2,015,607	29,227	68.96	65	67	106	3.22	3.32	5.26
East (Stockholm, Uppsala)	10	2,696,566	17,844	151.12	106	113	113	3.93	4.19	4.19
South (Malmö, Lund)	10	1,944,315	33,691	57.71	70	101	93	3.60	5.19	4.78
North (Umeå)	10	1,466,824	268,911	5.45	64	76	82	4.36	5.18	5.59
Central (Linköping, Örebro)	14	1,667,757	40,171	41.52	94	76	86	5.64	4.56	5.16
All regions	53	9,791,069	389,844	25.12	399	433	480	4.08	4.42	4.90
Military field hospital	1	14,600	N/A	N/A	6	6	12	41.10	41.10	82.19

Table 5. Regional differences with regards to population density, number of hospitals and surgical capacity

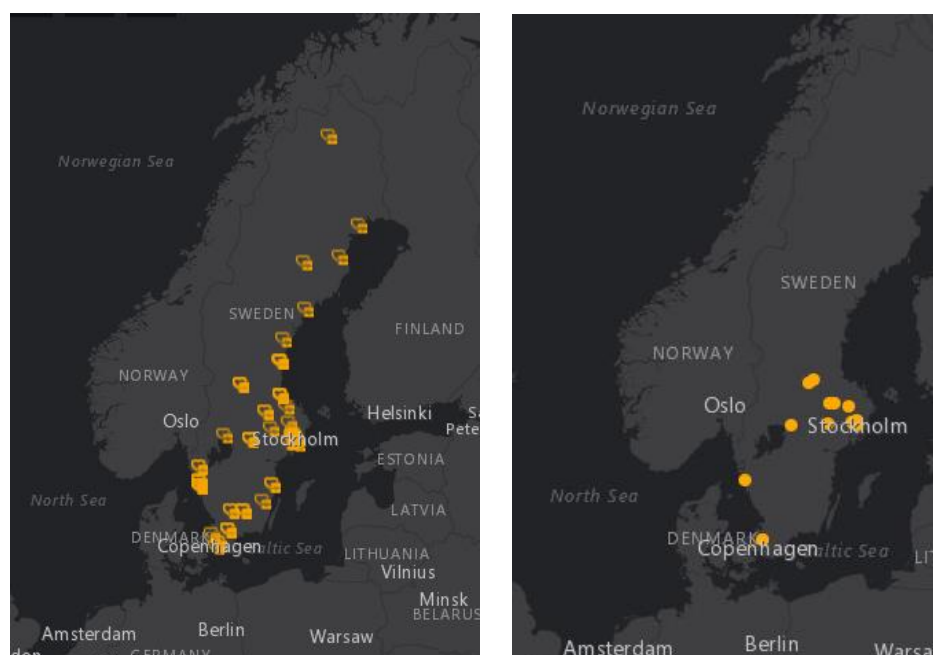


Figure 7. Left: hospital projects in Sweden as of December 2020. Right: long-term care projects in Sweden as of December 2020 (Business Sweden, 2020)

2.5. Healthcare Professionals

In 2018, Sweden had in total 43,930 practicing physicians and 110,441 practicing nurses (OECD, Health Care Resources, 2021). In the same year there were 10.8 nurses per 1000 people, against 10.1 in Denmark and 18.1 in Norway (OECD, Nurses, 2021). **Figure 8** shows the spread of practicing physicians in the country per 1000 inhabitants in 2017.

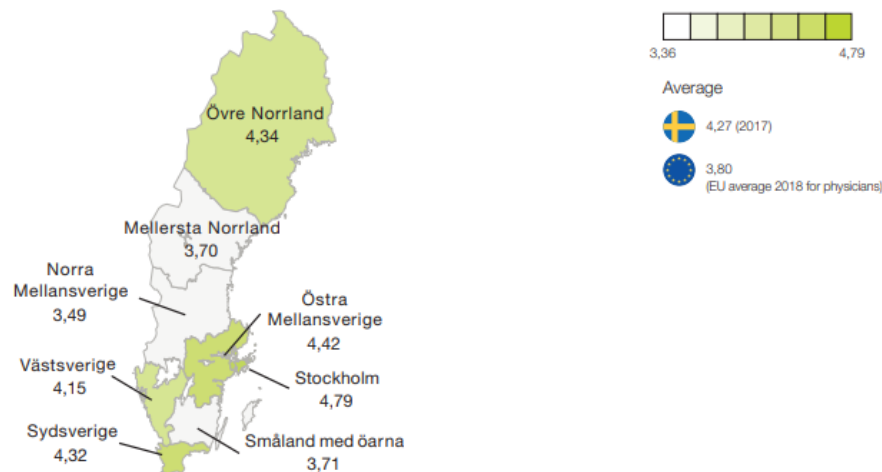


Figure 8. Number of practicing physicians per 1,000 inhabitants (Support for the health workforce planning and forecasting expert network, 2020)

Most healthcare personnel are members in professional unions (Anell, Glenngård, & Merkur, 2012). The Swedish Association of Health Professionals ([Vårdförbundet](#)) is a professional organization and union representing over 100,000 nurses, midwives, biomedical scientists, and radiographers. The Swedish Medical Association ([Sveriges Läkareförbund](#)) is the professional organization and union representing physicians. The Swedish Medical Association has over 55,000 members (Sveriges läkarförbund, 2021). Private healthcare employers are represented by the Association of Private Care Providers Almega ([Vårdföretagarna Almega](#)). The association negotiates salaries and benefits for over 2,000 member companies and the employers of over 100,000 people in the health sector in Sweden (The Association of Private Care Providers, 2021). The associations and unions are very respected and influential entities in Sweden. Attending to the needs and desires of these associations could bode well for Dutch companies looking to enter the Swedish healthcare market. More on market entry in Sweden is discussed in [Chapter 3](#).

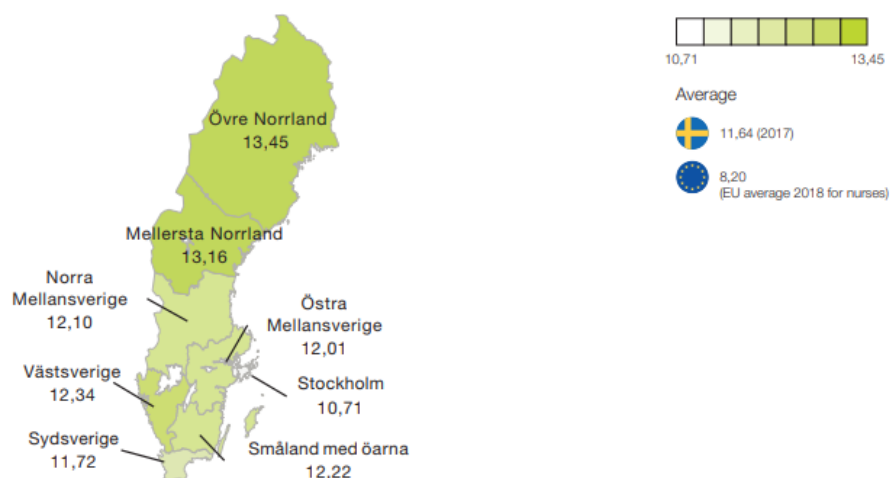


Figure 9. Number of practicing nurses and midwives per 1,000 inhabitants (Support for the health workforce planning and forecasting expert network, 2020)

One major challenge in Sweden in the past decade has been a shortage of specialized staff and especially nurses. The staff shortages have been identified as one of the greatest threats to the future of Swedish healthcare (Ejd, 2015). Shortages are highest in the regions of Stockholm and South Sweden, as seen in **Figure 9**. The problem in the system has been exposed overtly during the COVID-19 pandemic. Already during the first wave in March 2020, there was a shortage of specialist nurses, including ICU nurses. On top of that, more healthcare workers were resigning after a year of working under pressure of the pandemic. In 13 of Sweden’s 21 regions, resignations in the health-care profession increased (Rolander, 2020).

A 2020 report of the OECD on waiting times in the health care sector, done with the most recent data available, showed waiting times in Sweden had deteriorated between 2013 and 2016. The share of people reporting that they “sometimes, rarely or never get an answer from their regular doctor’s office on the same day” grew from 16% in 2013 to 24% in 2016. In 2016, 52% of the people waited one month or more for a specialist appointment (OECD, 2020).

2.6. Health Outcomes

As presented in **Table 1**, Sweden has a life expectancy of 83 years, the same as Norway and slightly higher than Denmark with 81 years. The health life expectancy is in Sweden the highest of the 3 countries, namely 71.9 in 2019 (Statistics Sweden, 2021). As for many countries, there is a gap in life expectancy between people with the highest and lowest level of education. In 2017, this difference in years was 5.6 for men and 3.9 for women (Statistics Sweden, 2021). The difference between educational level and life expectancy were among the lowest of EU countries in Sweden. For men, the difference was 4 years and for women it was 2.7 years (OECD, 2020).

The leading causes of death in Sweden are coronary heart diseases, stroke, Alzheimer’s disease and lung cancer. The top 10 causes of total numbers of death in 2019 and a comparison to 2009 can be found in **Figure 10** (IHME, 2019).

The leading risk factors that cause for most deaths and disabilities in Sweden are tobacco use, high blood pressure, dietary risks and high fasting plasma glucose (indicator of a higher risk for diabetes). The top 10 risk factors that contributed to a total number of Disability Adjusted Life Years (DALYS) in 2019 a comparison to 2009 can be found in **Figure 11** (IHME, 2019).

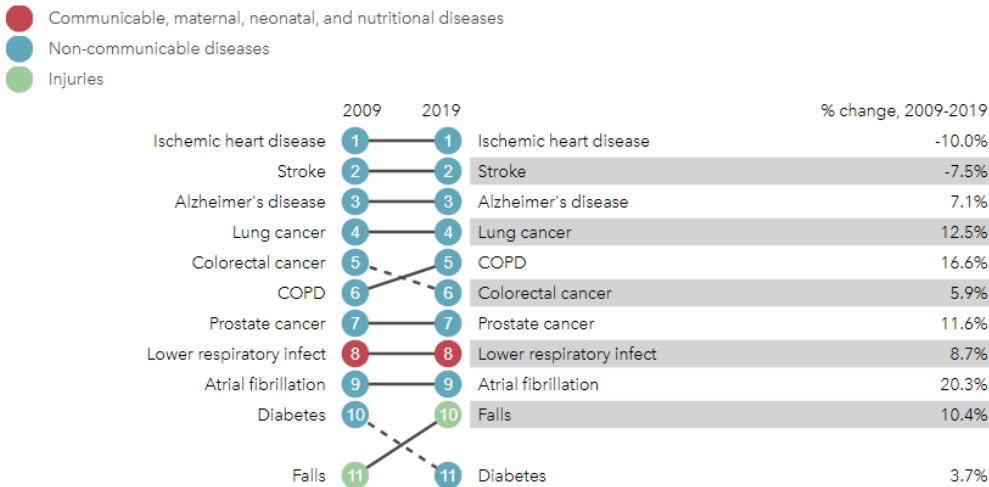


Figure 10. Top 10 causes of total number of deaths in 2019 and percent change 2009-2019, all ages combined (IHME, 2019)

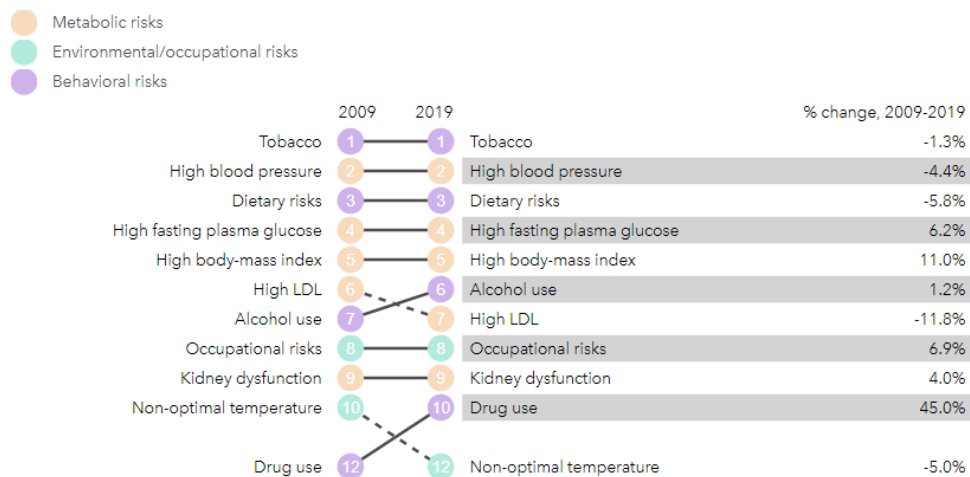


Figure 11. Top 10 risks contributing to total number of DALYs in 2019 and percent change 2009–2019, all ages combined (IHME, 2019)

Cancer care in Sweden

In 2015, the Swedish government initiated a national cancer reform program to standardize cancer care pathways. Primary aims included shortened waiting times among patients with suspected cancer, increased patient satisfaction and reduced regional variation. Waiting times have shortened for the pathways launched first, and patients are satisfied with a more transparent process. The results of the initiative so far seem promising (Schmidt I, 2018). However, during the COVID-19 pandemic many care services were postponed, including screening programs for cancer. This will most likely result in more diagnoses, which puts pressure on the system.

Life expectancy has risen for almost 250 years in Sweden, and with a high expected age, the risk of dementia and thus the number of patients with the disease grows. 130 000–150 000 people currently live with dementia, and each year 20 000–25 000 develop the disease (Ministry of Health and Social Affairs, 2018) By 2030, it is estimated that between 180,000 and 190,000 Swedes will be living with dementia and in 2050 250,000 people (Svenskt Demenscentrum, 2021).

Over time, the following investments in dementia care have been done (Ministry of Health and Social Affairs, 2018):

- In the 2015–2018 electoral period, the government invested around 700,000 euros to increase staffing in care for older people, an investment that funded around 5,000 full-year equivalent employees and improved care quality, safety and security for individual older people.
- In 2016, the Swedish Dementia Centre was allocated around 180,000 euros to increase the use of training material on countering the use of coercive measures in care.
- In 2017, the government granted the Swedish Dementia Centre around 180,000 euros to continue disseminating training material and 90,000 euros to revise the Dementia ABC and Dementia ABC Plus training programs.
- In 2018, the Swedish Dementia Centre received around 35,000 euros to follow up the Vision Zero training initiative and around 45,000 euros to support the training programs Dementia ABC, Dementia ABC Plus, Working safely with drugs and Vision Zero.

- In 2016, the government tasked the National Board of Health and Welfare with conducting an inquiry and producing comprehensive supporting documents for both a broad national dementia care strategy and a plan for prioritized measures in the area until 2022.
- In 2016–2018, the Swedish Dementia Registry was allocated around 150,000 euros per year to develop the registry.
- In 2016–2018, the BPSD register (register of behavioral and psychological symptoms of dementia) was allocated around 150,000 euros per year.

In May 2018, the Swedish government launched a national strategy on dementia. The plan aims to find and help patients with dementia from first diagnosis to care and treatment. A finalized strategy is due to be presented to the Swedish government by 1 June 2022.

Digital innovations in the elderly care sector

From a cost-efficiency perspective, it is beneficial to care for the elderly in their own environments for a longer period of time. Yet, from a personal perspective this is not always the best choice. Welfare technologies have been developed to care for elderly in their personal environments for a longer period of time. Sweden carried out many pilot projects on these technologies, and elderly care homes have become increasingly digitalized. On the other hand, the care centres excel in providing personalized care. Therefore, the care homes try to find a balance in adopting digital innovations between efficiency and personal attention.

There are several actors on the ground working in dementia. For example, [The Swedish Dementia Centre](#) is a non-profit organization working to share knowledge on dementia and improve care towards a more dementia friendly society. In 1996, Her Majesty Queen Silvia of Sweden opened Silviahemmet, devoted to improving the quality of life for people with dementia and their families. Today, the [Foundation Silviahemmet](#) works in collaboration with [Sophiahemmet](#) University and [Karolinska Institutet](#) to educate nurses and physicians in specialized dementia care, receiving the title Silvia Sister or Silvia Doctor.

2.7. COVID-19 development and outcomes

Unlike in many other countries, the Swedish government did not impose a general lockdown. This was not possible due to the Swedish constitution that prohibits governmental regulations on the free movement of people in time of peace. Only *Folkhälsomyndigheten*, the Swedish Public Health Agency, could propose actions for fighting the pandemic, which the government follows. Where many countries' strategies focussed on fighting and eradicating the novel coronavirus, the Swedish government followed a strategy of protecting its population and preventing overburdening the health system (Claeson & Hanson, 2021).

The COVID-19 pandemic mainly hit the elderly care homes, as in May 2020 half of the reported COVID-19 linked deaths, were residents of such homes. Research on the situation in the care homes has shown that with higher staffing and a smaller proportion of temporary employees, the nursing homes would most likely have been able to withstand the corona infection better (Kommunal, 2021). The Swedish government has promised changes in the pattern of health care workers, including more resources and funding to staff institutions, more continuous days for health care workers and the provision of training for implementing different assistive devices and technologies.

Besides, communication between the regions is a point of improvement that has been shed light on during the pandemic. Regions communicated little about the public health situations in their territories. Moreover, as a clear socio-economic difference between people affected by a COVID-19 infection was visible in

Stockholm's neighborhoods, there started a discussion on inequality in healthcare. Also, people from immigration background were targeted more severely by the spread of the virus.

Despite, or perhaps because of, the pandemic, nation-wide surveys have shown that confidence in healthcare has risen sharply in 2020. More and more residents also believe that they have access to the care they need. 69 percent of the inhabitants have great or fairly great confidence in the health care as a whole in their region, an increase of 9 percentage points from the previous year. The increase is taking place in all 21 regions in the country (SKR, 2021) .

Moving forward, the following topics will be emphasized as topics-of-interest for healthcare stakeholders in the post-COVID era (Kommunal, 2021) (Valeriana, et al., 2020):

- Provision of assistive devices and technologies for healthcare workers, including training of workers.
- Data-exchange and communication between municipalities.
- Telemedicine, remote monitoring and disease (self) management that allows healthcare to be provided at home.
- Implementing digital health for a more effective and equitable public health response.

3. MARKET STRUCTURE

The following chapter will describe the business climate, market entry opportunities, and procurement procedures in Sweden. Insight will be presented on the business culture, the use of the English language, and the tax climate for businesses. For sector-specific opportunities, see [Chapter 4](#) of this report.

3.1. Business Climate

Sweden is ranked 10th in The World Bank's Ease of Doing Business Index in 2019 and is ranked 2nd in Forbes' Best Countries for Business list in 2018 (The World Bank, 2021; Forbes, 2018). Sweden is a member of the European Union (EU). As such, many regulations of the Swedish market fall under EU directives. Much like Denmark and Norway, Swedish business culture is mainly non-hierarchical and open. However, Swedes can be slightly more reserved and formal while doing business. According to Transparency International, Sweden ranked third as a least corrupt country in the world in 2020. (Transparency International, 2021). As such, the role of the Swedish media is strong. Dutch companies working in Sweden should be prepared to interact with Swedish media.

The Swedish tax frameworks for business are favorable in comparison to other OECD countries. By international standards, the corporate tax rate is competitive at 20.6% since 1 January 2021 or lower, depending on the sector (PwC, 2021). The corporate tax rate is based solely on annual profit. Taxes on licensing and local corporate taxes do not apply in Sweden (PwC, 2021). In addition, Sweden has tax reductions for key foreign employees. If qualified, key employees will be taxed on 75% of their income during their first three years of employment in Sweden (PwC, 2021).

Like Norway and Denmark, Sweden has a highly-educated workforce that works comfortably in English. According to the English Proficiency Index, Sweden ranks 4rd in the world for English proficiency in 2020 (Education First, 2020).

3.2. Market Entry

While English is widely used in business, it is beneficial to have a contact who speaks Swedish. Most business is conducted in Swedish and many tenders are floated in Swedish. Some healthcare professionals can be uncomfortable speaking English. There is a close business relationship between the Nordic countries because Scandinavian languages and cultures are similar. Scandinavians can understand one another's languages. Therefore, Sweden, Denmark, and Norway have the benefit of being able to work with one another in their native languages. There is a limited presence of Dutch companies in Sweden, such as [Philips](#) and [Linet Group](#). For a non-exhaustive list of major medical device and supply companies please see [Appendix C](#).

Buurtzorg in Sweden

Sweden was the first country, after the Netherlands, that [Buurtzorg](#) exported their concepts to. Since 2011, also in the north of Stockholm small teams of autonomous community health care workers are operated. The concept was a success in Sweden and the team exponentially rose in members. Although in 2017 there were difficulties with municipal funding for the concept, the teams are in place today.

There are several ways to enter the market in Sweden. One route to market entry is by influencing and inspiring politicians. This strategy may be most efficient if business interests align with political interests. You can showcase your product, or describe your smart solution to a municipal politician, for example. After this, you can enter into a public procurement process. Generally, entering through political channels can be challenging. Another way to enter the market is by targeting patient groups in Sweden. There are hundreds of patient and disease interest groups in Sweden, alongside other healthcare organizations and interest groups in Sweden. To reach these groups, Dutch companies should consider attending trade shows and conferences. See [Appendix D](#) for a list of relevant trade shows and conferences. Attending trade shows and conferences and reaching patient groups, healthcare professional unions, and associations can be a very effective way to enter the Swedish consumer market.

Useful organizations for market entry and information

To enter the Swedish market, advice can be sought from [Business Sweden](#). Business Sweden is owned by the Swedish Government and the industry. Business Sweden was formed in 2013 through a merger between the Swedish Trade Council and Invest Sweden. In Sweden, Business Sweden helps foreign companies to establish and research activities. The company provides advice, information, and support free of charge. Business Sweden can also connect businesses with experts in the healthcare market including medtech and medical devices. [Invest Stockholm Business Region](#) provides similar services specific to the Stockholm region. Invest Stockholm Business Region is owned by the City of Stockholm. The company promotes investment in Stockholm and encourages business to enter the Stockholm business region. [Business region Göteborg](#) provides services specific for the region of Göteborg. It is the responsible entity for business development in the region and covers 13 municipalities.

[The Dutch Chamber of Commerce](#) in Sweden is a non-profit organization that functions as a platform for (Dutch) professionals to establish a network in Sweden. [Swecare](#) is a non-profit platform where academia, public and private sector join forces toward enhanced export and internationalization of Swedish health care and life science. The platform has members from different subsectors, from wound care to university medical centres and elderly care.

Useful organizations that for market entry and information on the Dutch side include RVO (Netherlands Enterprise Agency) and [Regional Business Developers](#) based in Denmark and Sweden. In addition, the [Netherlands Embassy in Stockholm](#) provides a good point of entry. Also, [Task Force Health Care's](#) relevant contacts and activities within the country can help you to expand your knowledge, network and business.

Given the decentralized nature of the Swedish healthcare market, Dutch companies should consider reaching out to these entities to better understand specific opportunities and challenges in different healthcare sectors.

Report: Communicate and negotiate in the Nordics

The embassies of the Netherlands in the Nordic countries (Denmark, Sweden, Norway and Finland) published a [guide](#) on how to communicate and negotiate in business cultures of the Nordic countries. The [guide](#) was published in 2016, but provides relevant up to date tips.

3.3. Procurement

The Public Procurement Act ([Lagen om Offentlig Upphandling](#)) (LOU:2016) governs public procurement of services, works, and supplies in Sweden. The act is largely based on [Directives from the European Union](#) (EU). The following principals are applied to the procurement of all services, works, and supplies:

- **The principle of non-discrimination:** Prohibits discrimination against suppliers on the grounds of nationality or location. This principle is intended to open the procurement process to foreign tenders.
- **The principle of equal treatment:** Ensures equal treatment of all suppliers, including equal access to information.
- **The principle of transparency:** Obliges contracting authorities to provide information about the procurement procedure. This entails that contractual documents must be clear and contain all requirements of the contract.
- **The principle of proportionality:** Ensures proportionality between the contracts between the supplier and the specifications of the subject matter in the contract.
- **The principle of mutual recognition:** Recognizes diplomas and certificates issued by authorities approved by other EU/EEA countries (The National Agency for Public Procurement 1).

The procurement process is safeguarded by the Swedish Competition Authority ([Konkurrensverket](#)). The Swedish Competition Authority is responsible for supervision of procurement, recommending measures and standards for effective public procurement, and conducting research on these matters. The National Agency for Public Procurement ([Upphandlingsmyndigheten](#)) provides support to companies in procurement processes. The National Agency for Public Procurement is a good resource for companies to familiarize themselves with specific principals guiding procurement in Swedish markets.

Like Denmark, Swedish tenders that fall under EU procurement procedures are posted directly to [Ted: Tenders Electronic Daily](#) (Swedish Competition Authority). Tenders Electronic Daily is the EU portal for public procurement. The nomenclature used on contracts is standardized and regulated following Common Procurement Vocabulary (The National Agency for Public Procurement 2). Many tenders for Swedish contracts are described in Swedish. This highlights the importance of having local support to access these opportunities.

4. ALIGNING DUTCH SMART SOLUTIONS TO SWEDISH OPPORTUNITIES

The following chapter presents information and opportunities in specific healthcare sectors in Denmark, including the areas of: healthy living & ageing, digital transformation, hospital design and build, biotechnology and biopharma, public health and innovative MedTech solutions. Below, you will find a brief summary of the Dutch strengths per healthcare sector, followed by various opportunities for these companies in Sweden. A more extensive analysis can be found in [Appendix E](#).

4.1. Healthy living and ageing

The strengths of the Dutch Mobility & Vitality subsector can be categorized as follows:

- **Promoting independence through self-management:** solutions that enable people to live longer independently in their home environment include care robots and tools that increase physical mobility and help regain function and freedom or aid with medication.
- **Social inclusion & mental care:** through solutions that foster physical and mental interaction or digital solutions that (re-)connect people to relatives
- **Nutrition & active lifestyle:** special diets, nutrition and specialized exercise areas for elderly or people with a physical or mental impairment.
- **Long-term and senior care models:** care models in the Netherlands are process-based and manage long-term and senior care by reducing the costs of care, while ensuring the quality of care for patients.
- **Research and education:** in the Netherlands, high-level research is conducted in the field of healthy ageing and elderly care.

Opportunities in Health Ageing and Healthy Living

Privatization and outsourcing

Especially in the Stockholm area, private parties are increasingly becoming involved in the provision of elderly care. Services are outsourced to private parties in public owned facilities. The Association of Private Care Providers ([Vårdföretagarna](#)) reports about the elderly care market in Sweden. The number of private companies in elderly care is growing, yet the business model for these solutions remains complicated. This is often dependent on the reimbursement per patient that care providers receive via the municipalities. Approximately 14% of all nursing homes and homecare services are provided by private providers (The Commonwealth Fund, 2020). Municipalities usually hire private providers on a contract basis through a public tendering process (The Commonwealth Fund, 2020).

Procurement in elderly care

Upon referral from municipalities, patients choose their own care providers for home services, home care, and long term care. There are no clear indicators or ranking systems for Swedish citizens to compare care providers. The service [Seniorval.se](https://seniorval.se) is the largest information platform for elderly services. Seniorval.se does not rank or distinguish private care providers, but merely provides information to users.

Each municipality operates its own procurement for long term care technology, assistive devices, and care services. Procurement in the municipalities can prove challenging due to decentralization. In the procurement of mobility and vitality goods and services, Dutch companies could potentially have 290 municipalities as clients. This presents both an opportunity and a challenge.

New innovative living spaces

In Sweden, there is a demand for co-living spaces and other new forms of innovative blended living with the elderly. Most of the elderly want to live at home for as long as possible, and co-living environments can function as an option in-between home and a nursing house. As co-living has come a long way in the Netherlands already, Sweden looks with interest to these projects.

Besides, Sweden is working towards diminishing the elderly population that feels isolated. There are some applications in use to help prevent isolation and loneliness.

Changing narrative about quality of life and renewed attention post-covid

In Sweden, the number of elderly is growing at a fast rate, much faster than the working population. By 2050, it is projected that 25% of the Swedish population will be over the age of 65 (Statistics Sweden, 2021). As with Norway and Denmark, Sweden aims for their citizens to live comfortably at home for as long as possible. The government therefore sees it as a top priority to find solutions that are aimed at preventive care and living a healthier life. Welfare technologies for home care and day-to-day living aspects have been piloted on a large scale. Elderly care homes have become more digitalized, yet Sweden has also tried to find a balance between “colder” technological innovations and the warmth of personal care provision.

The discussion about the financing of elderly care and the burden thereof has changed during the COVID-19 pandemic. Work is carried out towards finding a balance between cost of care and the quality of life. Society saw elderly people as a collective before COVID-19, but this perspective is changing to seeing and treating them as individuals. (Forum for Health Policy, 2020). In light of the pandemic, the Swedish government has promised more money to elderly care workers, optimization of their working hours (e.g., more continuous days, no working ‘blocks’), better training opportunities and assistive devices and technologies.

Solutions for staff shortage

In Sweden, more people per capita died during the pandemic than in its Nordic counterparts. Especially in nursing homes, the loss of lives was big. At the end of 2020, approximately half of the coronavirus deaths were nursing home residents. This was mainly due to paralysis of the nursing home system, of which lack of personnel was part. Therefore, there is an urge and demand for solutions that help to solve the shortage of elderly care workers and that unburden personnel in nursing homes.

Prevention and financing

Mainly in the region of Stockholm, there is a trend towards supporting preventive measures for healthcare, mainly in the field of (pre-) diabetic patients. Funding is available for the population to spend on applications and coaches helping to maintain a healthy lifestyle. However, new reimbursement models need to be established for this trend in prevention.

Sweden's Budget bill for 2022

Sweden's Budget bill for 2022 will be presented soon. Already now bits and pieces are being released. It is however still uncertain if the budget will get the needed votes in parliament.

Below some information in English about the budget bill for 2021:

[Reforms to increase welfare in the Ministry of Health and Social Affairs' areas of responsibility – the Budget Bill for 2021 - Government.se](#)

The pandemic has shown the importance of medical research and innovation. For increased competitiveness and for Sweden to be even better equipped for future pandemics and other health challenges, the government therefore announces a number of initiatives in the research and innovation policy bill, including internal funding. For this purpose, Vinnova will receive a total of SEK 486 million in 2021-2024.

The life science sector is an important industry for Sweden. Through investments in cross-sectoral innovation and future areas such as molecular diagnostics and production of biological drugs, better conditions are created for Sweden's researchers, companies and other actors working to develop new drugs and other methods.

The work is further based on the Government's national strategy for life science, which was presented in 2019. In order to promote the work within the collaboration program Health and Life Science and contribute to realizing the proposals for innovative solutions that have been identified, Vinnova is tasked with supporting the following three initiatives:

- Support for the development of new molecular diagnostics and treatment aims to build infrastructure for the introduction of precision medicine in Swedish health care with the help of the Genomic Medicine Sweden (GMS) initiative.
- The investment in the national program for protein research and drug production secures funding for the program during 2021-2023.
- The initiative exploratory cross-sectoral medical research and innovation in collaboration will fund cross-sectoral research and innovation collaborations for the development of refined diagnostics and more effective treatments that improve human health.

Vinnova invests around SEK 3 billion in research and innovation annually.

Vinnova is also a national contact authority for the EU framework program for research and innovation (Horizon 2020).

4.2. Accelerating digital transformation: Connected Care and Artificial Intelligence

Within the subcategory Connected Care, there are several strengths and focus areas:

- **Remote care applications:** the major aspect is the exchange of data between and amongst patients, healthcare professionals and (informal) caregivers.
- **Safe, secure and interoperable apps and platforms:** many information systems, devices and applications need to connect within and across organizations, including Electronic Health Records and Hospital Information Management Systems. Dutch solutions enable access, exchange, integration and organize safe use of health data within and across organizational and national boundaries.
- **Research on patient empowerment:** Dutch research has focused on self-management of patients.

Strengths and focus areas within the subcategory Analytical & Artificial Intelligence include:

- **Improving efficiency:** by collecting and analyzing data, workflows, processes and teamwork among nursing staff, doctors, or other healthcare providers can be improved.
- **Clinical decision support solutions:** this includes solutions that are used for gathering and analyzing (actionable) data, automating tasks, providing insights and guidance for health professionals

Agency for Participation

[The Swedish Agency for Participation](#) (Myndigheten för delaktighet) works under the premise that everyone is entitled to full participation in society, regardless of functional ability. They aim for more digital inclusion. It promotes the use welfare technology for the aging population and disabled people through guides and information on different devices available on their website. The Swedish Agency for Participation does not promote specific companies, but rather supplies individuals with information on what is available on the market.

Opportunities in Connected care and eHealth

Connected healthcare

Connected healthcare is one of the focus areas of digital health in Sweden. One of the challenges in the (digital) healthcare infrastructure of the country is the communication and collaboration between regions and municipalities. Regions are in charge of specialized and primary care, municipalities are in charge of elderly care, disabled care and prevention. Interoperability between the two levels is relatively low, which is a challenge to companies selling digital solutions to both regions and municipalities. Between regions, interoperability is relatively better. [Inera](#) is responsible for procuring and providing national eHealth services to member organizations. Inera has over 500 member organizations including all the municipalities and county councils in Sweden. It works towards bridging the gap between the digital health infrastructure of the regions and municipalities. Regions are responsible for buying new digital solutions. During the pandemic, collaboration and information exchange between municipalities and regions increased.

Applications by institutes

There is a trend in healthcare institutions developing applications themselves, for the benefit of their own patients. For example, Karolinska Institutet developed an application to support children and parents in understanding their oncology treatments. Uppsala University Hospital also developed an application to predict and map in real time the spread of the coronavirus.

Vision for eHealth 2025

Under the national eHealth strategy Vision eHealth 2025, the Swedish government aims to make Sweden the best country in the world in eHealth solutions by 2025. Prescriptions were digitalized in the early 2000's in Sweden. Today, 99% of prescriptions are digitalized and over 83 million e-prescriptions are prescribed each year. The Swedish eHealth Agency will coordinate the governmental initiatives in eHealth to effectively streamline platforms and practices in different levels of care and government. The strategy committed to developing a national prescription medicine list that can be used by all levels of care to increase efficacy and patient safety and to enable e-prescriptions across international borders. Today, the Swedish eHealth Agency operates four registers; the National Patient Register, the Swedish Cancer Register, the Swedish Medical Birth Register and the Swedish Prescribed Drug Register, which are interoperable with each other. The registers are updated each month and contain information about for example the decline of prescription of antibiotics.

COVID-19 related changes

The pandemic increasingly affected the way in which healthcare was organized at the hospitals and other care institutions. There have been incentives to work less in silos and to adopt new and more innovative working routines that include different layers of the healthcare system, e.g., municipalities and regions, and hospitals and elderly care facilities. Digitalization of healthcare has accelerated in general, although at a slower rate than in most Nordic countries. This is attributed to the way in which decisions are made in Sweden, as decision making is heavily based on consensus building, even more so than in the Netherlands.

Opportunities in Artificial Intelligence

Innovative start-up applications

Swedish startups are leading the way in the global development of digital healthcare, or health tech, by providing access to different forms of healthcare through mobile, artificial intelligence (AI) and other technologies. For example, [KRY](#) is a doctor-patient app that lets doctors and psychologists meet patients over video. It has garnered a lot of attention. The company works with the publicly funded national health systems of the countries where it operates, which so far include Sweden, Norway and Spain.

Other examples of applications that are currently in use and that provide for digital meetings with a Swedish doctor are [Min Doktor](#), [Flow Neuroscience](#), [Doctrin](#) and [Joint Academy](#).

4.3. Hospital Design and Build

The strengths of the Dutch Hospital Design and Build subsector can be categorized as follows:

- **Turn-key projects;** total projects, reaching from planning, architecture and design, to building, furnishing and operations.
- **Design, architecture & engineering;** planning, feasibility, design, architecture of health care facilities.
- **Sub-construction & (integrated) parts;** components integrated in the construction or bigger detachable parts.
- **Furnishing, equipping & operations;** furniture, smaller equipment and solutions needed to manage health care facilities.

Opportunities in Hospital Design and Build

Future Hospital Nordic

Yearly, the event [Future Hospital Nordics](#) takes place, in Finland or online during the pandemic, which includes speakers from all Nordic countries and representatives from the most important hospital projects. The event offers an opportunity to get the latest insights in hospital trends and transformations in the Nordic countries.

SDG goals and tenders

Today, tenders and procurement possibilities in hospital design, build and equipment focus on sustainability of the project. Solutions and companies offering them need to have a sustainability impact in order to be successful in tendering in Sweden. Tenders include compliance with the Sustainable Development Goals, a trend that has been visible for over the past 3 years. Demands of sustainable building vary from reducing waste in hospital canteens to energy efficient solutions. Reducing overall medical waste is a focus of all of the Nordic countries. Not only in hospital build and design, but also in medical technology and devices, there is a demand to reduce single-use products. Including your company's sustainability impact is a good selling point in the sector of hospital design and build and provides opportunities for Dutch companies.

Hospitals of the future

In the hospitals for the future that are being developed, the number of beds will drastically be reduced. Inpatient treatment is substituted by outpatient treatments and digital consults. There will only be single patient rooms. Healthcare is provided as close to the patient as possible, in personal living environments. The hospital is only consulted when a patient is in need of highly specialized treatment.

Mainly in the region of Gothenburg, there have been renovations on hospital buildings. These renovations are often led by municipality-owned real estate companies. Projects are commissioned by county councils or municipalities. The procurement procedure is open and transparent, following EU directives. Most tenders are released only once, covering the entire project cost. Some of the largest construction companies in Sweden are [NCC](#), [Peab](#), and [Skanska](#).

Information databases

In the hospital build sector, [Byggfakta](#) and [Sverige Bygger](#) are reliable sources for information on upcoming hospital projects. These companies provide insight to the construction market to their members. Both companies map where, when, and what is being built in Sweden. They provide clients with information on planned and ongoing constructions projects, detailed investment plans, and advanced notice on construction requests. With access to their databases, members can specifically search for hospital build projects. Byggfakta has a larger geographic span and provides services in Sweden, Denmark, and Norway. Sverige Bygger provides services in Sweden and Norway. Membership fees to the database are determined by the land area that wants to be covered (i.e., only Stockholm county, several counties, or all of Sweden) and the sector (i.e. only hospital build). For access to construction activities in all of Sweden in the hospital build sector, membership fees start at 3,700 euros per year. The price also depends on how many employees have access to the database. Dutch companies interested in entering the Swedish hospital build market should consider membership with these service providers. These companies can also assist Dutch companies in identifying partnership opportunities with architects and developers in Scandinavia.

4.4. Biotech and Biopharma

Biotech & Biopharma encompasses a broad area of pharmaceutical and biotech innovations and solutions to prevent and treat diseases in an early stage in order to boost a healthy, sustainable and prosperous future. Organizations within this strength offer solutions in areas such as drug development, diagnostics, vaccines and therapies tailored to the needs of the patient. According to the Dutch Life Sciences Trend Analysis 2020, there are currently 469 Biotech companies and 42 BioPharma companies active within the Dutch Life Science industry.

Organizations within this strength offer solutions in areas such as drug development, diagnostics, vaccines, and therapies tailored to the needs of the patient. The Netherlands is particularly strong in the following fields:

- **Oncology**
- **Neurology**
- **Infectious diseases**

Opportunities for Biotech and Biopharma

Consultancy and CMO/CRO opportunities

There is a growing need for consultancy companies that provide advice on regulations around Biopharma and Biotech in Sweden. In this area, there is little competition and advice is often looked for outside Sweden.

For companies active in Contract Manufacturing (CMO's) and Contract Research (CRO's), there are also opportunities. This is a growing market as the competition for these types of companies is almost zero.

Swedish Pharmaceutical pipeline report

In 2020, SwedenBIO published their new pipeline report. From 2016 to 2020, the number of drug development and preclinical projects has increased from 369 to 420. There are 148 companies with headquarters in Sweden that develop drugs. There has also been a growth in the number of companies, especially with projects in clinics. More companies have reached phase III or are on the way to approval of new products. Oncology and neurology are the dominant areas of therapy, followed by endocrinology and infection. Almost a third, 128 projects, are developed in the field of cancer. As many as 26% of the projects are aimed at a rare disease. 59% originate from academia or health care, 50% have attracted international capital and 100% of the respondents have international collaborations of various kinds. The full report can be found [here](#).

Precision healthcare

Precision healthcare is a costly investment, but can also save money in the long term. In Sweden, the interest in precision medicine is growing and will transform healthcare significantly. This will alter the collaboration between public and private companies, as the former are less willing to invest in precision medicine. [Genomic Medicine Sweden](#) in Stockholm is the national network that looks into the diagnostics of precision medicine. Karolinska Institute and their university hospital have established a taskforce (Precision Medicine Center) that is looking at the introduction of precision medicine on a broader scale.

Specialization in cancer care

More than 10 years ago, the Swedish regions decided to join forces in providing cancer care. This led to more equality in cancer care between the regions. Cancer care pathways became standardized in a decentralized system. Cancer care in Sweden is characterized by high survival rates and a generally high quality.

In Sweden, the National Board of Health and Welfare coordinates which university hospitals specialize in which area of healthcare.

Openness towards collaboration

Innovation has a supportive environment in Sweden. Government agencies encourage innovation, research, and development. Universities and research institutes look for opportunities to collaborate. Likewise, the public is well-informed and looks for products that are evidence-based. However, county councils and municipalities are slower to adopt innovative tools and products. For this reason, Dutch companies should consider a long-term strategy when looking to enter the Swedish market.

Medicon Valley

Medicon Valley is the leading international life-sciences cluster spanning the Greater Copenhagen region of eastern Denmark and southern Sweden. The cluster is home to 9 life sciences universities, producing 5,742 PhDs every year. There are hosted 28 hospitals of which 11 are university hospitals. The region has a presence of more than 580 life science companies. There are 212 LSH projects in the pipeline including 60 within oncology. The region is an example of knowledge transfer between the public and private sector with 14,600 public researchers in 2018 (Medicon Valley Alliance, 2021).

4.5. Public Health

Dutch organizations are focused on translating policy into practice. The strength Public Health consists of the following expertises:

- **System Management;** entails 'organizations involved in changing the foundations of health systems'.
- **Capacity Building;** consist of 'organizations that help to enhance the competences and capabilities of actors in the health care system',

Opportunities for Public Health

Infection control

The Public Health Agency of Sweden ([Folkhälsomyndigheten](#)) is the national agency responsible for public health issues. Infection control is a key area that the Agency works on. Sweden conducts research aimed at strengthening national and European preparedness for outbreaks of severe communicable diseases. The Agency participates in international research projects, including collaborations on Ebola, efficient response to highly dangerous and emerging pathogens at EU level and in the European Research Infrastructure on Highly Pathogenic Agents. In Solna, the Agency operates a high-containment laboratory with biosafety level 4, the only laboratory with this security level in the Nordic countries and one of the few in Europe.

Anti-microbial resistance

Battling Antimicrobial Resistance (AMR) is one of the European and international priorities of the Swedish Ministry of Health and Social Affairs. In 2020, the Swedish Strategy to Combat Antimicrobial Resistance 2020-2023 was adopted. This strategy is intended to form the basis of Swedish efforts to curb the development and spread of antibiotic resistance and to prevent and manage its consequences. The strategy has seven objectives:

1. Increasing knowledge through enhanced surveillance
2. Continued strong preventive measures
3. Responsible use
4. Increased knowledge for preventing and managing bacterial infections
5. Improved understanding and awareness in society
6. Supporting structures and systems
7. Leadership within the EU and international cooperation

The complete strategy in English can be found [here](#). The Dutch Ministry of Health, Welfare and Sport has a strong focus on limiting AMR as well, and therefore this area is one of possible collaboration.

Extensive national databases

Sweden has arguably some of the best health registries in the world. The registries contain information covering the entire Swedish population with individual health information over a lifetime. Sweden has approximately 100 National Quality Registries in health. Each registry contains data on the individual level with certain risk factors, diagnoses, treatments, and the outcome of care. Each registry is managed by a registrar and a steering committee. A list of the National Quality Registries is presented in [Appendix F](#). The National Quality Registries on health can be linked to Swedish registries in other sectors, such as school performance or criminal activity. To access the registries for research purposes, researchers must apply to both the registry and to the registry service under the National Board of Health and Welfare. For more information on specific application procedures see the [Swedish National Quality Registries](#) website. For Dutch researchers, the Swedish health registries present opportunities to conduct unique population-wide studies or retrospective cohort studies with data on risk factors, healthcare treatments, and health outcomes.

Swedish Research Funding

In partnership with a Swedish university, funding for research can be sought from the Swedish Research Council ([Vetenskapsrådet](#)). Each year the Swedish Research Council allocates 683 million euros in research of all kinds. Calls for proposals in various areas, including health and medicine, are published on their website. The Swedish Research Council encourages international research cooperation, especially within the EU. This presents an important opportunity for Dutch researchers to access Swedish data and utilize Swedish funders.

4.6. Innovative MedTech solutions to improve quality, accessibility and affordability

Dutch solutions contribute to the quality, accessibility and affordability of healthcare services in the following medical specialties:

- **Mother-child care;**
- **Oncology;**
- **Orthopedics:** orthopedic rehabilitation;
- **Neurology:** neurological rehabilitation.
- **Assistive technologies:** technology and tools to increase, maintain or improve the functional capabilities of the work force.
- **Research on non-invasive diagnostics:** developing rapid and low-cost diagnostics using biochips, to detect cancer and other medical conditions.

In general, research is done on techniques that reduce the demand for care by developing technology that lower costs and the deployment of care personnel.

Opportunities in Medical Technology

Strong Swedish MedTech sector

As compared to Denmark and Norway, Sweden has a stronger medical device manufacturing industry. The country is relatively less reliant on imports of medical devices than other Nordic countries are, and imported 73,6% of its medical devices in 2017. It exports relatively more products. The top destinations of Swedish medical devices are the USA, Norway, Germany and the Netherlands. Therefore, medical devices companies

can either be competitors or partners for Dutch companies in the sector. A list of medical technology companies can be found on [The Swedish Life Science Industry Guide](#) website.

Regulations of MDR and IVD

Besides, for these type of technologies, post-market surveillance is complicated. Many of the companies in these technologies are not Swedish. There is a lack of notifying bodies that work within post-market surveillance in Sweden.

In-Vitro Diagnostic Medical Device Regulations entered into force on April 5th, 2017 within the EU and the Swedish market. As of 26 May 2022, the IVDR fully apply and from 26 May 2024, all devices entering the market must adhere to the IVDR.

Clinical decision supports

There is a growing need for medical devices and assistive technologies in the field of clinical decisions support as the workload is increasing for physicians.

Swedish MedTech and the Swedish Medical Association published a [report](#) on the attitudes and stances of physicians towards these type of solutions.

Hubs for MedTech

The region of Stockholm and Uppsala, and the Malmö-Lund region are the major hubs for MedTech and medical devices in Sweden.

In May 2021, a new medical technology research lab opened at Sahlgrenska University Hospital in Gothenburg. The lab is a major investment in clinical research, and a collaboration between the hospital, Chalmers, Sahlgrenska Academy and Region Västra Götaland. The lab houses research equipment with microwaves and biomagnetic sensor technologies. Microwave research will initially focus on new treatment methods for head, throat and neck cancer, as well as non-invasive diagnosis of bleeding in brain and muscles, and breast cancer. For the biomagnetic sensors, functional studies of the brain are planned, with magnetoencephalography for patients suffering from diseases like epilepsy and dementia, and studies of heart rhythm disturbances with magnetocardiography. The lab is open to international collaborations and partnerships.

Swedish Medtech

[Swedish Medtech](#) is an association for medical technology in Sweden. The association has approximately 200 member companies developing medical technology for medical imaging, orthodontic implants, minimal invasive surgery products, physical disability, and other specialized areas (Swedish Medtech). Becoming a member of Swedish Medtech may provide advisement and opportunities to new companies looking to establish themselves on the Swedish market. Swedish Medtech also assist municipalities and county councils in the procurement processes.

4.7 General trends for opportunities

National Life Sciences Strategy 2020

In 2020, the Swedish government adopted the National Life Sciences Strategy. This national strategy aims to strengthen the long-term competitiveness of Sweden as a life sciences nation. LSH stakeholders primarily include universities and higher education institutions, government agencies, authorities responsible for health and social care services, companies operating in the life sciences area and public and private financiers of research and innovation. The strategy establishes a life sciences coordination function - the Life Sciences Office - to serve as a link between life sciences sector stakeholders and the Government's work. The complete strategy in English can be found [here](#).

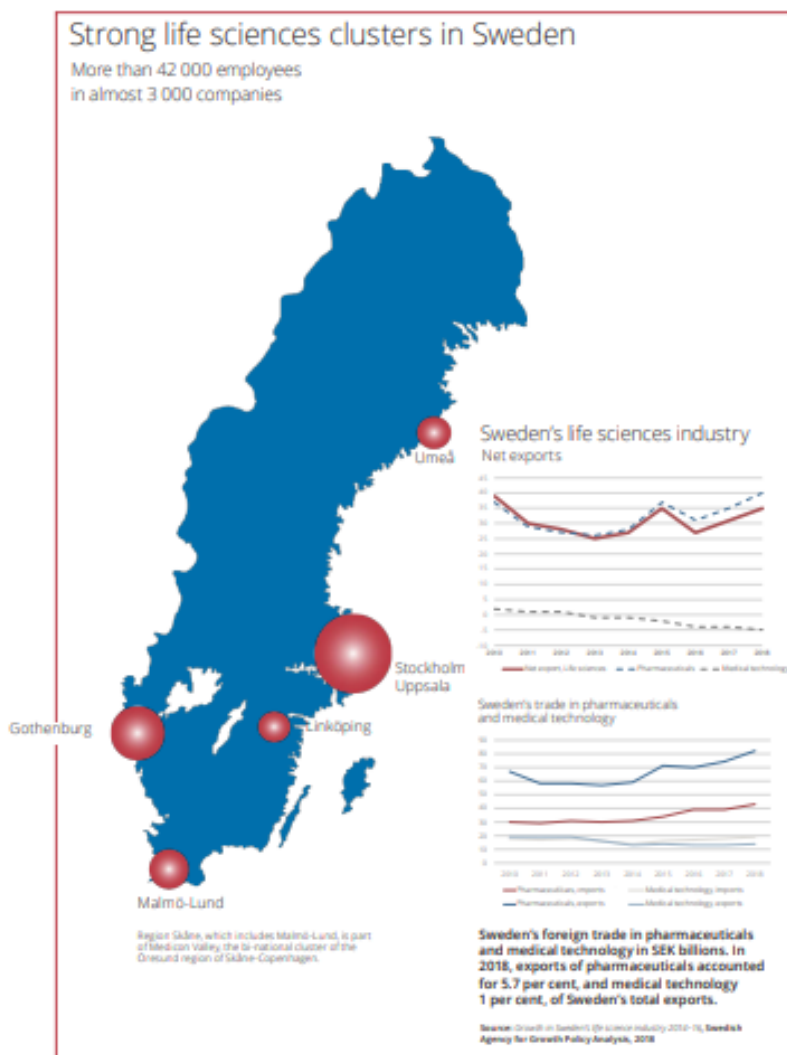


Figure 12. Sweden's life sciences industry and clusters

Where to go from now?

Below, you can find a list of useful organizations that can help you to further identify and utilize your opportunities in the Swedish life sciences and health sector.

Mobility and Vitality

- [Ageing Research Center](#)
- [Stockholm Gerontology Research Center \(Äldrecentrum\)](#)
- [Dementia Association \(Demensförbundet\)](#)
- [The Swedish Dementia Centre \(Svenskt Demenscentrum\)](#)

eHealth

- [Inera; procuring and providing national eHealth services to member organizations](#)
- [Swedish Agency for Participation](#)

Hospital design and build

- [Sverige Bygger](#)

Biotech and Biopharma

- [SwedenBIO](#)
- [Swedish LabTech](#)
- [The Swedish Association of the Pharmaceutical Industry \(Läkemedelsindustriföreningen\)](#)
- [Genomic Medicine Sweden](#)

Public Health

- [Swedish Research Council \(Vetenskapsrådet\)](#)

MedTech

- [Swedish MedTech](#)

General

- [The Association of Private Care Providers Almega \(Vårdföretagarna Almega\)](#)
- [The Swedish Medical Association \(Sveriges Läkarförbund\)](#)
- [The Swedish Association of Health Professionals \(Vårdförbundet\)](#)
- [Business Sweden](#)
- [Invest Stockholm](#)
- [Business Region Göteborg](#)
- [Swecare](#)
- [Invest in Skåne](#)
- [Vinnova; Swedish government agency for financing innovation](#)

5. CONCLUSIONS

This report has highlighted the Top 10 Reasons for Dutch companies to be interested in the Swedish healthcare market. The report has also presented concrete information and opportunities in six specific healthcare sectors in Denmark, including the areas of: healthy living & ageing, digital transformation, hospital design and build, biotechnology and biopharma, public health and innovative MedTech solutions.

In research, product development, and innovation there are unique opportunities for Dutch companies and researchers. Sweden is an open and transparent country that readily collaborates with international stakeholders. Researchers should be lured by the vast amounts of health data available by the national databases and the unique public health areas coming into focus. These public health areas include innovation for precision medicine, anti-microbial resistance and infection control.

The top ten reasons also highlight the decentralized structure of Sweden, which lends its hands to several opportunities. Swedish procurement is decentralized to the county councils and municipalities. In mobility and vitality, the growing aging population in Sweden presents significant opportunities for Dutch companies to provide assistive devices and medical technology solutions in different municipal markets. The Swedish elderly care sector is especially interested in Dutch innovative living solutions and solutions that help to diminish the workload of staff shortages. Elderly care is increasingly being privatized, which provides options for different kinds of Dutch solutions.

With decentralized hospital construction, there are dozens of opportunities to enter the hospital construction sector and procurement processes in the county councils. Opportunities in hospital design and build include solutions that increase the sustainability of hospitals and solutions that facilitate the 'hospitals of the future' in Sweden, which means facilitation of outpatient treatment and single patient rooms.

Likewise, the consumer market prioritizes solutions that are evidence-based. For Dutch smart solutions, collaboration with municipalities and universities to pilot and test innovation is important to being successful on the Swedish market. With evidence-based solutions, building relationships with patient organizations in Sweden can be helpful. The health sector in Sweden is strong and an important part of the economy. As such, Dutch companies can tap into the reliance on medical device imports and specialized product areas.

Sweden has many examples of innovative start-ups that are leading the way in the global development of digital healthcare, or health tech, by providing access to different forms of healthcare through mobile, artificial intelligence (AI) and other technologies. Also in the field of connectivity and interoperability, there are opportunities for Dutch companies as the country is bettering its connections between national, regional and municipal healthcare institutions.

In summary, with transparent procurement and openness to international collaboration, there are significant potential opportunities for Dutch companies in the Swedish healthcare market. One of the greatest challenges in the Swedish healthcare market is finding opportunities. Unlike Norway and Denmark, procurement of goods and services in Sweden is decentralized. From the hospital build sector to medical technology, each region and municipality is responsible for their own procurements. For Dutch companies, this can mean challenges to find opportunities. Besides, this means that decisions have to be made on several levels, which means longer negotiating times. This is especially true for solutions that have involvement of politics. In elderly care, decisions are usually made faster.

At the same time, the decentralized structure of the Swedish healthcare market means unique Dutch companies can find opportunities to meet the healthcare needs of different municipalities. Ultimately, upon success, the Swedish market can open doors to the global healthcare market.

Next steps

This report marks an important step to strengthen the bilateral healthcare relation between Sweden and The Netherlands. Together with the RBD team and the Netherlands Embassy in Stockholm, future steps and activities will be identified to further connect Swedish and Dutch healthcare stakeholders and build towards sustainable healthcare relationships. Please get in touch with TFHC or the RBD team.

For information about the programmatic approach to the Nordics and Baltics region and interest in joint cooperation with groups of like-minded companies:

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OUR APPROACH

TASK FORCE HEALTH CARE

IMPROVING HEALTH CARE TOGETHER

Established in 1996, Task Force Health Care (TFHC) is a public-private not-for-profit platform that represents and supports the Dutch Life Sciences & Health (LSH) sector. Our platform has a reach of 1,200 LSH organisations in the Netherlands, with 130 dedicated and diverse partners. Our partners include government, industry, knowledge institutes, NGOs, and healthcare providers.

Our core mission is to improve health care and well-being internationally and in a sustainable and demand-driven manner, with the use of Dutch expertise. We are currently actively engaged with over 20 countries to stimulate and facilitate relationships on government-, knowledge- and business levels. Our partners are active around the world and provide innovative and sustainable solutions relevant to both global and local health care challenges.

A PROGRAMMATIC APPROACH

Bridging Knowledge, Aligning Interests and Identifying Opportunities

Fostering and Strengthening Networks

Facilitating Dialogues on Health Themes and Opportunities to Collaborate

OUR FOCUS

- > Mutual Interests and Benefits
- > Developing Sustainable and Long-Term Approaches
- > Demand-Driven and Context Specific

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APPENDICES

Appendix A: Agencies under the Ministry of Health and Social Affairs

Name of Agency	Key Responsibilities
National Board of Health and Welfare Socialstyrelsen	Supervises and licenses all health care personnel, disseminates information, develops norms and standards for medical care and ensures through data collection and analysis that those norms and standards are met.
Health and Social Care Inspectorate Inspektionen för Vård och Omsorg	Responsible for supervising health care, social services, and activities concerning support and services for people with disabilities. It is also responsible for issuing permits in those areas.
Agency for Health and Care Services Analysis Myndigheten för vård- och omsorgsanalys	Analyzes healthcare, dental care, and social care from the patient and user perspective. Makes advisory recommendations to the government in quality care improvement.
The Public Health Agency Folkhälsomyndigheten	Provides the national government, government agencies, municipalities, and regions with evidence-based knowledge regarding infectious-disease control and public health
Medical Products Agency Läkemedelsverket	The Swedish national authority responsible for the regulation and surveillance of the development, manufacture, and sale of drugs and other medicinal products.
Swedish Council on Technology Assessment in Health Care Statens beredning för medicinsk och social utvärdering	Promotes the use of cost-effective health care technologies. The council reviews and evaluates new treatments from medical, economic, ethical, and social points of view.
Dental and Pharmaceutical Benefits Agency Tandvårds- och Läkemedelsförmånsverket	The principal agency for assessing pharmaceuticals. Since 2002, it has had a mandate to decide whether particular drugs and medical devices should be included in the National Drug Benefit Scheme; prescription drugs and medical devices are priced, in part, on the basis of their value.
Swedish ehealth Agency eHälsomyndigheten	Promotes information-sharing among health and social care professionals and decisionmakers. It stores and transfers electronic prescriptions issued in Sweden and is responsible for transferring electronic prescriptions abroad. The agency is also responsible for statistics on drugs and pharmaceutical sales.

Appendix B: Geographic spread of university hospitals in Sweden

- [Norrland University Hospital](#)
- [University Hospital Linköping](#)
- [Karolinska University Hospital](#)
- [Örebro University Hospital](#)
- [The Uppsala University Hospital](#)
- [Skåne University Hospital](#)
- [Sahlgrenska University Hospital](#)



Appendix C: National and multinational medical product companies in Sweden (Business Monitor International Ltd, 2017)

National companies with manufacturing in Sweden

- Atos Medical
- Biora
- Breas Medical
- Comfort Audio (Sonova)
- Dentsply Siora Implants
- Elekta
- Gambro
- Getinge
- Molnlycke Health Care
- Nobel Biocare
- Nordiska Dental
- Ortivus
- Wellspect Healthcare

Multinational companies with manufacturing in Sweden

- Baxter
- Fresenius Kabi
- GE Healthcare
- St Jude Medical

Multinational companies *without* manufacturing in Sweden

- B. Braun
- Becton Dickinson
- Boston Scientific
- Fresenius Medical Care
- Johnson & Johnson
- Medtronic
- Philips
- Siemens Healthineers
- Smith & Nephew
- Stryker

Appendix D: List of relevant trade fairs and events in Scandinavia

- [Health & Rehab Scandinavia](#)
- [WHINN: Week of Health and INNOvation](#)
- [Nordic Life Science Days](#)
- [Nordic-American Life Science Conference](#)
- [VITALIS: The Largest eHealth event in Scandinavia](#)
- [Almedalen Week](#)
- [Medtech Procurement Conference](#)
- [Medtech Week Sweden](#)
- [European Public Health Conference](#)
- [Allt För Hälsan](#) – The largest health and wellness fair in the Nordics
- [Pharmaceutical Sciences World Congress](#)
- [Mötesplats Välfärdsteknologi och E-Hälsa](#) (Meetingplace for welfare technology and eHealth)

Appendix E: Overview of Dutch strengths per healthcare sector

Healthy Living and Healthy Ageing

The Netherlands is active in several areas to foster healthy living and ageing. Dutch organizations are active in healthy ageing, but also mobility & vitality, prevention and lifestyle solutions that help people live and age healthily are present. Elderly play a significant role in the Netherlands and have therefore drawn attention from many research institutes, companies and government. The life expectancy in the Netherlands is one of the highest in the world and continues to increase every year. Demographic developments have forced the Netherlands to become engaged in mental care and wellbeing, with a specific expertise in dementia.

The strengths of the Dutch Mobility & Vitality subsector can be categorized as follows:

- **Promoting independence through self-management:** solutions that enable people to live longer independently in their home environment include care robots and tools that increase physical mobility and help regain function and freedom or aid with medication.
- **Social inclusion & mental care:** through solutions that foster physical and mental interaction or digital solutions that (re-)connect people to relatives
- **Nutrition & active lifestyle:** special diets, nutrition and specialized exercise areas for elderly or people with a physical or mental impairment.
- **Long-term and senior care models:** care models in the Netherlands are process-based and manage long-term and senior care by reducing the costs of care, while ensuring the quality of care for patients.
- **Research and education:** in the Netherlands, high-level research is conducted in the field of healthy ageing and elderly care.

Accelerating digital transformation: Connected Care and Artificial Intelligence

Dutch solutions relevant for the digital transformation in healthcare have several unique characteristics. They are renowned for their simplicity, consistency, and flexibility, while being developed through shared decision-making. The solutions have a patient-centered view. There are two subcategories in eHealth in the Dutch landscape: Connected Care and Artificial Intelligence.

Within the subcategory Connected Care, there are several strengths and focus areas:

- **Remote care applications:** the major aspect is the exchange of data between and amongst patients, healthcare professionals and (informal) caregivers.
- **Safe, secure and interoperable apps and platforms:** many information systems, devices and applications need to connect within and across organizations, including Electronic Health Records and Hospital Information Management Systems. Dutch solutions enable access, exchange, integration and organise safe use of health data within and across organizational and national boundaries.
- **Research on patient empowerment:** Dutch research has focused on self-management of patients.

Strengths and focus areas within the subcategory Analytical & Artificial Intelligence include:

- **Improving efficiency:** by collecting and analyzing data, workflows, processes and teamwork among nursing staff, doctors, or other healthcare providers can be improved.
- **Clinical decision support solutions:** this includes solutions that are used for gathering and analyzing (actionable) data, automating tasks, providing insights and guidance for health professionals

Hospital Design and Build

The Netherlands has expertise ranging from the initial design phase to the eventual maintenance and operations phase, with organizations having executed projects all around the globe. Dutch organizations widely acknowledge that all these hospital's components are connected, and therefore have experience

along the whole trajectory. Special expertise is centred around offering turnkey projects, thereby offering total solutions that unburden customers in the complexity of creating health care facilities.

The strengths of the Dutch Hospital Design and Build subsector can be categorized as follows:

- **Turn-key projects;** total projects, reaching from planning, architecture and design, to building, furnishing and operations.
- **Design, architecture & engineering;** planning, feasibility, design, architecture' of health care facilities.
- **Sub-construction & (integrated) parts;** components integrated in the construction or bigger detachable parts.
- **Furnishing, equipping & operations;** furniture, smaller equipment and solutions needed to manage health care facilities.

Biotech and Biopharma

Biotech & Biopharma encompasses a broad area of pharmaceutical and biotech innovations and solutions to prevent and treat diseases in an early stage in order to boost a healthy, sustainable and prosperous future. Organizations within this strength offer solutions in areas such as drug development, diagnostics, vaccines and therapies tailored to the needs of the patient. According to the Dutch Life Sciences Trend Analysis 2020, there are currently 469 Biotech companies and 42 BioPharma companies active within the Dutch Life Science industry.

The Netherlands is particularly strong in the following fields:

- **Oncology**
- **Neurology**
- **Infectious diseases**

Public Health

Dutch organizations are focused on translating policy into practice. This also relates to the experimental and innovative nature of the Netherlands, what is often needed to induce real change in health systems. The Netherlands and its organizations are engaged in a broad area of Public Health. However, there are specific areas in which the Dutch have developed an international reputation, like multi-drug and antibiotic resistance, and sexual & reproductive health rights. The Dutch feel strongly about shared values like the principle of equality, which is manifested in the Netherlands through gender equality.

The strength Public Health consists of the following expertises:

- **System Management;** entails 'organizations involved in changing the foundations of health systems'.
- **Capacity Building;** consist of 'organizations that help to enhance the competences and capabilities of actors in the health care system'.

Innovative MedTech solutions to improve quality, accessibility & affordability

Dutch medical devices are developed in the Netherlands' managed competition health system, a system in which high quality and cost-effectiveness are fostered. These medical devices are the product of human-centred design, which leads to cutting-edge innovation which add value to the quality of care and patient experience and lower the cost of healthcare services.

Dutch solutions contribute to the quality, accessibility and affordability of healthcare services in the following medical specialties:

- **Mother-child care;**
- **Oncology;**
- **Orthopedics:** orthopedic rehabilitation;
- **Neurology:** neurological rehabilitation.

- **Assistive technologies:** technology and tools to increase, maintain or improve the functional capabilities of the work force.
- **Research on non-invasive diagnostics:** developing rapid and low-cost diagnostics using biochips, to detect cancer and other medical conditions.

In general, research is done on techniques that reduce the demand for care by developing technology that lower costs and the deployment of care personnel.

Appendix F: List of national health registers in Sweden

- [National Quality Register for Bipolar Affective Disorder \(Bipolär\)](#)
- [National Quality Registry for ADHD Treatment Follow-up \(BUSA\)](#)
- [National Quality Registry for Amputation and Protheses \(SwedAmp\)](#)
- [National Quality Registry for Ankle Arthroplasty](#)
- [National Quality Registry for Assisted Reproductive Technology \(Q-IVF\)](#)
- [National Quality Registry for Atrial Fibrillation and Anticoagulation \(Auricula\)](#)
- [National Quality Registry for Behavioural and Psychological Symptoms of Dementia \(BPSD\)](#)
- [National Quality Registry for Better Management of Patients with Osteoarthritis \(BOA\)](#)
- [National Quality Registry for Bladder Cancer](#)
- [National Quality Registry for Brain Tumours](#)
- [National Quality Registry for Breast Cancer](#)
- [National Quality Registry for Breast Implants](#)
- [National Quality Registry for Cardiopulmonary Resuscitation](#)
- [National Quality Registry for Caries and Periodontitis](#)
- [National Quality Registry for Cataracts](#)
- [National Quality Registry for Catheter Ablation](#)
- [National Quality Registry for Cervical Cancer Prevention](#)
- [National Quality Registry for Child and Adolescent Habilitation](#)
- [National Quality Registry for Child and Adolescent Psychiatry \(Q-bup\)](#)
- [National Quality Registry for Child Preventative Health \(BHVQ\)](#)
- [National Quality Registry for Childhood Cancer](#)
- [National Quality Registry for Childhood Epilepsy \(BEPO\)](#)
- [National Quality Registry for Childhood Obesity \(BORIS\)](#)
- [National Quality Registry for Cleft Lip and Palate \(CLP\)](#)
- [National Quality Registry for Colorectal Cancer Treatment \(SCRCR\)](#)
- [National Quality Registry for Congenital Heart Disease \(SWEDCON\)](#)
- [National Quality Registry for Congenital Metabolic Diseases](#)
- [National Quality Registry for Corneal Transplant](#)
- [National Quality Registry for Cruciate Ligament Injuries](#)
- [National Quality Registry for Cystic Fibrosis](#)
- [National Quality Registry for Dementia \(SveDem\)](#)
- [National Quality Registry for Dependency \(SBR\)](#)
- [National Quality Registry for Diabetes \(NDR\) with SWEDIABKIDS](#)
- [National Quality Registry for Ear, Nose and Throat Care](#)
- [National Quality Registry for Eating Disorders \(RIKSÄT\)](#)
- [National Quality Registry for Electroconvulsive Therapy \(ECT\)](#)
- [National Quality Registry for Endovascular Treatment of Ischemic Stroke \(EVAS\)](#)
- [National Quality Registry for Enhancement and Development of Evidence-Based Care in Heart Disease \(Swedeheart\)](#)
- [National Quality Registry for Follow-up of Persons with Cerebral Palsy \(CPUP\)](#)
- [National Quality Registry for Forensic Psychiatry \(RättspsyK\)](#)
- [National Quality Registry for Fractures](#)

- [National Quality Registry for Gallstone Surgery and Endoscopic Retrograde Cholangiopancreatography \(GallRiks\)](#)
- [National Quality Registry for Gender Dysphoria](#)
- [National Quality Registry for Gynaecological Oncology](#)
- [National Quality Registry for Gynaecological Surgery \(GynOp\)](#)
- [National Quality Registry for Haemophilia](#)
- [National Quality Registry for Hand Surgery \(HAKIR\)](#)
- [National Quality Registry for Head and Neck Cancer](#)
- [National Quality Registry for Heart Failure \(RiksSvikt\)](#)
- [National Quality Registry for Hepatitis \(InfCare Hepatit\)](#)
- [National Quality Registry for Hernia](#)
- [National Quality Registry for Hip Arthroplasty](#)
- [National Quality Registry for Hip Fracture Patients and Treatment \(RIKSHÖFT\)](#)
- [National Quality Registry for HIV \(InfCare HIV\)](#)
- [National Quality Registry for Infectious Diseases](#)
- [National Quality Registry for Inflammatory Bowel Disease \(SWIBREG\)](#)
- [National Quality Registry for Inguinal Hernia Surgery \(Swedish Hernia Registry\)](#)
- [National Quality Registry for Intensive Care \(SIR\)](#)
- [National Quality Registry for Internet-Based Psychological Treatment](#)
- [National Quality Registry for Kidney Cancer](#)
- [National Quality Registry for Knee Arthroplasty](#)
- [National Quality Registry for Leukaemia](#)
- [National Quality Registry for Liver, Bile Duct and Gallbladder Cancer \(SweLiv\)](#)
- [National Quality Registry for Lung Cancer](#)
- [National Quality Registry for Macula](#)
- [National Quality Registry for Malignant Melanoma](#)
- [National Quality Registry for Mammography Screening](#)
- [National Quality Registry for Neonatal Care \(SNO\)](#)
- [National Quality Registry for Neurological Care \(NEUROreg\)\(previously Swedish MS Registry\)](#)
- [National Quality Registry for Neuromuscular Diseases](#)
- [National Quality Registry for Obesity Surgery \(SOReg\)](#)
- [National Quality Registry for Oesophageal and Stomach Cancer](#)
- [National Quality Registry for Paediatric Kidney Disease](#)
- [National Quality Registry for Paediatric Orthopaedic Conditions \(SPOq\)](#)
- [National Quality Registry for Paediatric Rheumatology](#)
- [National Quality Registry for Pain Rehabilitation \(NRS\)](#)
- [National Quality Registry for Palliative Care](#)
- [National Quality Registry for Pancreatic and Periampullary Cancer](#)
- [National Quality Registry for Penile Cancer](#)
- [National Quality Registry for Perioperative Care \(SPOR\)](#)
- [National Quality Registry for Pituitary Disease](#)
- [National Quality Registry for Podiatric Surgery \(RiksFot\)](#)
- [National Quality Registry for Pregnancy](#)
- [National Quality Registry for Preventative Care \(Senior Alert\)](#)
- [National Quality Registry for Primary Immunodeficiency \(PIDcare\)](#)
- [National Quality Registry for Prostate Cancer \(NPCR\)](#)

- [National Quality Registry for Psychiatric Care Monitoring \(“The Quality Star”\)](#)
- [National Quality Registry for Psychosis Care \(PsykosR\)](#)
- [National Quality Registry for Pulmonary Arterial Hypertension \(PAH\)](#)
- [National Quality Registry for Rehabilitation for Visual Impairment \(SKRS\)](#)
- [National Quality Registry for Rehabilitation Medicine \(Webrehab Sweden\)](#)
- [National Quality Registry for Renal Failure \(SNR/SRR\)](#)
- [National Quality Registry for Respiratory Diseases \(RiksKOL+ NAR\)](#)
- [National Quality Registry for Respiratory Failure](#)
- [National Quality Registry for Rheumatic Diseases \(SRQ\)](#)
- [National Quality Registry for School Health Services](#)
- [National Quality Registry for Shoulder and Elbow Arthroplasty](#)
- [National Quality Registry for Sleep Apnoea](#)
- [National Quality Registry for Spinal Dysraphism and Hydrocephalus \(MMCUP\)](#)
- [National Quality Registry for Spine Surgery \(SWESPINE\)](#)
- [National Quality Registry for Stroke \(Riksstroke\)](#)
- [National Quality Registry for Systemic Psoriasis Treatment \(PsoReg\)](#)
- [National Quality Registry for Testicular Cancer \(SWENOTECA\)](#)
- [National Quality Registry for Thyroid Cancer](#)
- [National Quality Registry for Thyroid, Parathyroid and Adrenal Surgery \(SORTPA\)](#)
- [National Quality Registry for Trauma](#)
- [National Quality Registry for Ulcer Treatment \(RiksSår\)](#)
- [National Quality Registry for Vascular Surgery \(Swedvasc\)](#)

Appendix G: List of Distributors in Sweden

For a complete list see [The Swedish Life Science Industry Guide](#).

- [VWR International AB](#)
- [Techtum Lab AB](#)
- [Pretech Instruments](#)
- [Intramedic AB](#)
- [Medical Market I.N.T. AB](#)
- [SynMed Medicinteknik AB](#)
- [AH Diagnostics AB](#)
- [Thermo Fisher Scientific](#)
- [Lab Teamet AB](#)