IN-DEPTH ACCESSIBILITY STUDY

**Annex to Digital Health Care
and Social Care – Regional
development impacts in
the Nordic countries**

Solund

Askvoll

Hyllestad

IN-DEPTH ACCESSIBILITY STUDY

**Annex to Digital Health Care and Social Care
– Regional development impacts in
the Nordic countries**

Oskar Penje, Shinan Wang, Teodor Wolk

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Annex to Digital Health Care and Social care –
Regional development impacts in the Nordic countries**

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Introduction

This accessibility study is an annex to the main VOPD main report and shows the current situation regarding the potential geographic accessibility of health care for the residents in the VOPD case study regions. The report also addresses the situation regarding the potential accessibility of social care for the elderly population in the VOPD case study municipalities. The theoretical approach and methodology is built on a previous Nordregio project commissioned by the Icelandic Office for Regional Development (Byggðastofnun) in 2016, which covered the potential geographic accessibility of health care in the Icelandic regions.

The Nordic 'Health care and care with distance-spanning solutions' (VOPD) project has been

initiated and funded by the Nordic Council of Ministers, with Glesbygdsmedicinskt Centrum as lead partner. The aim is to explore different aspects of digitalisation in the health and care sectors, and what impact these transformations might have on regional development. The geographical scope of the study is the Nordic Region as a whole, and the case study regions were specifically chosen as representative of rural regions in each country. In this perspective, results from the case study regions have been presented in such a way that any insight could be applied to other Nordic Regions with similar geographies and residential patterns.

Case study sites

Case studies were conducted across the Nordic Region, with one region and municipality selected from each territory (see Figure 1). In line with these case studies, the accessibility study encompasses all the case study sites except for the Faroe Islands and Greenland.

The region of Nordjylland and Morsø municipality were chosen for Denmark. Nordjylland covers the Northern part of Jutland where the landscape is predominantly agricultural, penetrated by the Limfjord from coast to coast. Nordjylland has a population of 589,936 (2020.1.1) and it is the least populated region in Denmark (see figure 2. Population density in case study regions, except for Greenland and the Faroe Islands). Morsø is one of eleven municipalities in the region and has a population of 20,247 (2020.1.1). It covers the entire island of Mors, which is connected to the mainland via two bridges on the east and west side of the island, and two short ferry routes – one in the northern end and one in the southern end.

The region of Sogn og Fjordane and Luster municipality were chosen for Norway. The landscape is mountainous, with agricultural land and fjords; the main ones being Sognefjorden (the longest in Europe), Førdefjorden and Nordfjorden. In terms of population, Sogn og Fjordane is – with 109,774 people (2019.1.1) – the second smallest region in Norway (see figure 2). In 2020, Sogn og Fjordane merged with the region of Hordaland to form the new region of Vestland, as part of the regional reform process in Norway. Luster municipality is the largest municipality in the region in terms of land coverage and is home to 5,174 inhabitants (2020.1.11).

The region of South Karelia (Etelä-Karjala) and Lappeenranta municipality were chosen for Finland. South Karelia is a region located in south-eastern Finland. It is characterised by the southern shores of Saimaa, which is the largest lake in the country and the fourth largest natural freshwater lake in Europe. In terms of population, South Karelia is – with 127,757 people (2019.12.31) – the fourth smallest region in Finland, after Åland, Central Ostrobothnia and Kainuu. South Karelia consists of nine municipalities. The region's largest

city and municipality is Lappeenranta with a population of 72,634 (2019.12.31).

The region of Västerbotten and Storuman municipality were chosen for Sweden. Västerbotten is the second most northerly region in the country. The landscape consists of vast forest areas, lakes and mountains. The total population in Västerbotten is 271,736 (2019.12.31). The region consists of 15 municipalities, some of them inland and some of them coastal, along the gulf of Bothnia. Storuman is one of the eight inland municipalities. It had a population of 5,852 in 2019 (2019.12.31).

In Iceland, the East Iceland health region, which covers the majority of Austurland, along with the municipalities of Fjarðabyggð and Fljótsdalshérað were the areas chosen. Fljótsdalshérað and Fjarðabyggð are two municipalities in East Iceland, covering a large and diverse geographical area. The region has fjords and the sea in the east, and to the west a highland area stretching from Iceland's only forest to the national park of Vatnajökull glacier and Kverkfjöll mountains. The two municipalities make up most of the East Iceland health region, with 8,670 people out of a total population of 10,670 in the region as a whole (2019.1.1).

In the Faroe Islands, Klaksvík was chosen as the case study municipality, while the region being studied was the Faroe Islands as a whole. Tórshavn, with 42% of the total Faroese population, is the political and administrative centre, as well as being the industrial and service centre for the islands. The total population of Tórshavn is 21,592 (2019.1.1). Klaksvík is the second largest municipality, with a population of 5,182 (2019.1.1). Located in Norðoyar (the Northern Islands), this municipality is connected to Tórshavn by the Northern Isles Tunnel (Norðoyatunnilin), which opened in 2006 (for population distribution in the case study regions except Greenland and the Faroe Islands, see figure 2).

The capital of Greenland, Nuuk, was selected as the specific municipality for the case study, with the whole of Greenland considered the case study region. In addition, the Disko and Qeqqa health regions, located in Qeqertalik and Qeqqata mu-

Figure 1. Case study regions and municipalities in VOPD.

nicipality, were also studied (Figure 2. Population density in case study regions, except for Greenland and Faroe Islands). As Greenland's largest town, it is the seat of government and the largest cultural and economic centre in the country. The population in Nuuk is 18,326 (2020.1.1), encompassing 33% of the country's total population. Kangerlus-

uaq, with 508 people (2020.1.1), is a settlement in western Greenland. Occupying an alluvial flatland, it is Greenland's main air transport hub and the site of its largest commercial airport. Sisimiut is the largest town in Qeqqata municipality, and second largest in Greenland. It has a population of 5,582 in 2020 (2020.1.1).

Figure 2. Population density in the case study regions, except for Greenland and the Faroe Islands.

Analytical approach

Potential geographic accessibility

What we mean by geographic accessibility is the potential ease of reaching a physical destination from a particular starting point, using a defined mode of transport. While mobility factors determine the means and opportunity for people to move between locations, the level of accessibility establishes the pre-conditions for these trips, based on spatial parameters and general transport supply. The mode of transport selected for these purposes is the motor vehicle. Factors determining accessibility by motor vehicles include distance, road quality and physical barriers.

In this study, the starting points are where people live and the destinations are the locations of the healthcare services to which they need access. Potential accessibility has been modelled as a car trip between these locations, and all roads traversable by car have been included in the modelling. The parameter measured is the time elapsed from start of trip to destination when complying with speed limits on the roads. Impedance factors like traffic congestion, pedestrian crossings or seasonal limitations in connectivity were not taken into account in this model. Along the fjord landscape of western Norway, the road network is highly dependent upon ferries. This is particularly significant in the region of Sogn og Fjordane, where in some cases connections between municipalities is impossible without ferries. Car ferry connections have scheduled departures. This means that all routes using these connections are reliant on the timing of the ferry's arrival in dock. To manage this parameter within the model, a standard time-penalty was added to every route using a car ferry, and this time added was based on the ferry's frequency of departure.

Health care facilities and categorisation

The Nordic countries share many similarities. However, when it comes to health care organisation there are also essential differences which make comparisons by national categories diffi-

cult, and not particularly meaningful. To enable a comparison of the accessibility of health care services across the Nordic Region, these facilities have been classified using a functional framework based on service levels, as listed below. This classification has been assessed at a case-to-case level for all publicly-funded health care facilities in the case study regions.

1. Out-patient primary care. Office hours — scheduled appointments. This is a primary care facility where patients make appointments with a doctor by phone or online.

2. Out-patient primary care. Office hours — direct service/drop-in. This is a primary care facility where patients go and meet a doctor during normal weekday hours without making an appointment.

3. Out-patient care. Non-office hours (evenings/weekend, or 24/7) direct service/drop-in

This is a primary care facility where patients go and meet a doctor during non-office hours (evenings/weekends/holidays) without an appointment.

4. In-patient care. This is a hospital or equivalent with overnight care and other hospital functions.

5. Highly specialised medical care/University hospital

Each health care facility can be assessed in relation to more than one service level. This classification system makes it possible to analyse the accessibility of a specific service level, rather than just for a facility type. For instance, primary health care units in Norway ('legekontor') and Denmark provide health care by scheduled appointments. However, many of those units also allow for drop-in service during office hours. As a result, these facilities qualify for inclusion in both category 1 and category 2. In Sweden, on the other hand, primary health care units usually only qualify for category 1. In addition, some of the remote primary care units in inner Västerbotten also provide emergency care, x-ray scanning and 24-hour health care using a small number of hospital beds. These so-called 'sjukstugor' are comparable to mini-hospitals.

tals, although they are organised under the primary health care system¹. As a facility, they qualify for inclusion in categories 1, 2, 3 and 4 in the VOPD health care service classification system.

Data and processing

The key methodology used in this study is network analysis, which looks at graphs and relations between discrete objects. In the field of geographic information systems (GIS), network analysis concerns the interrelation of objects in graph form, typically based on a traffic system network and its corresponding spatial data. Simple routing analyses can be further refined into analyses of service or market areas, or the accessibility of any spatially defined object, to name a few possibilities.

GIS-based service area analyses are typically based on graph theory. Put simply, the algorithm calculates the shortest paths from a given set of points, in this case locations of health care facilities, and finds the paths and nodes of the network which can be reached within given cost limits. As we were specifically interested in the areas that can be reached, so-called *alpha shapes* were created for these nodes of reachability – in other words, minimum enclosing polygons for the furthestmost reachable network nodes from each given facility. Since, in this case, we were interested in the service or catchment areas of health care facilities based on car traffic, those locations were selected along the road network and then enclosed with a

service area polygon which could be reached from a given facility within a given time.

The accessibility analysis was carried out in ArcMap, based on three geodata sources:

■ **Road network data.** Line vector data with attributes indicating restricted directions and speed limits. Official National datasets were used for Norway, Sweden and Finland. For Denmark and Iceland, Navstreets road data from Here Technologies was used.

■ **Health service locations.** Geo-coded data gathered from public platforms. These were verified and categorised with support from regional experts.

■ **Gridded population.** Population data on a 1000-metre grid. The geographic midpoints (centroids) were used in the calculation, serving as the proxy location of population's residency.

ESRI's Network Analyst and its service area tool were used for computation. This tool generates service area isochrone layers for the time breaks set by the parameters. An isochrone layer is a geographical surface covered within a time span when travelling in any direction from a particular starting point. The health care facilities were set as the starting point for these calculations. The travel time cut-off was set to 120 minutes in this model. Within 120 minutes, most of the population in the region can reach a primary care service by car.

¹ The 'sjukstuga' model is made possible by municipal co-funding.

Results

Nordjylland

Health care facilities

In total, 179 health care facilities were included in the accessibility analysis for Nordjylland in Denmark, five of which are located outside the region (Appendix 1). Geographically they are relatively close to the regional boundary, and inhabitants living along the boundary may therefore seek health care services in neighbouring regions. For the primary health care service, people should not have to cross the municipal border, and certainly not the regional border. However, for some hospital services,

the nearest hospital may be used, regardless of whether it is located inside the home region or not.

The region accommodates 174 health care facilities distributed across 11 municipalities. The number of facilities in each municipality, by category, is listed in Table 1, and their location is shown in Figure 3. The health care facilities are located in two groups. The out-patient care group consists of primary care, and drop-in care during office hours and in non-office hours. The in-patient care group includes in-patient care and highly specialised care.

Table 1. Health care facilities in Nordjylland.

Municipality	Total number of facilities	Primary care	Drop-in care office hours	Drop-in care non-office hours	In-patient care	Highly specialised care
Aalborg	54	53	52	3	2	3
Brønderslev	10	9	9	0	1	0
Frederikshavn	22	19	18	2	2	0
Hjørring	23	22	22	2	1	0
Jammerbugt	7	7	7	0	0	0
Læsø	1	1	1	0	0	0
Mariagerfjord	15	14	14	2	1	1
Morsø	6	6	6	0	0	0
Rebild	7	7	7	0	0	0
Thisted	19	18	18	2	1	1
Vesthimmerlands	10	9	9	2	1	1
Nordjylland total	174	165	163	13	9	6

Figure 3. Location of health care facilities in Nordjylland.

Accessibility analysis

The results of the accessibility analysis are presented in the following maps, with each map illustrating the accessibility of one health care service type. The colours represent drive time by car in minutes, from the place of residency to the nearest health care facility for a certain service type, with a range of ten minutes to two hours. The health care facilities are also located within the area covered by the map.

Accessibility to primary out-patient health care services in Nordjylland is outstanding. Altogether, 98.7% of the population can access one such service within a ten-minute ride, while a 20-minute ride covers 99.8% of the total population in the region (Figure 4). In total, 165 health care facilities provide primary health care in the region, contributing to an established pattern of extensive accessibility across Nordjylland. The people of Nordjylland have widespread access to out-patient drop-in care facilities during office

hours, thanks to the 163 health care facilities in the region which provide such a service (Figure 5). It takes ten minutes by car for 98.7% of the regional population to reach out-patient drop-in care facilities during office hours, 99.8% of the population is covered by a 20-minute car ride.

Compared with primary out-patient care and out-patient drop-in care during office hours, accessibility of out-patient drop-in care during evenings and weekends (24/7) is limited (Figure 6). Such health care services are available in only 13 out of the 174 facilities across the region. Half of the inhabitants in the region (54.2%) are able to access out-patient drop-in care during non-office hours within a ten-minute car ride, while a 40-minute car ride covers 99.5% of the regional population. Accessibility of in-patient care in Nordjylland presents a similar picture to that of out-patient emergency care during non-office hours. Nine health care facilities in the region provide in-patient care services, and outside the region five pro-

vide such a service (Figure 7). More than half of the inhabitants (58.7%) can access such health care services within a 10-minute car ride, and a car ride of 40-minute covers 99.5% of the regional population who need such a service. Despite the facilities outside the region being geographically close to the regional border, inhabitants living along that border line tend not to cross it in order to seek in-patient care.

Highly specialised care, being the most professional form of health care service, is also the most restricted in terms of accessibility for the gener-

al population in Nordjylland, compared to other types of health care (Figure 8). The six hospitals offering specialised care are located in Aalborg (three hospitals), Vesthimmerlands (one), Mariagerfjord (one) and Thisted (one). To reach a specialised health care service, it takes ten minutes by car for 41.5% of the regional population. Specialised care is particularly accessible for those who live in or near the urban centre of Aalborg. On the other hand, a car ride of longer than 30 minutes is needed for 13.8% of inhabitants in the region to access specialised care.

Figure 4. Accessibility to primary care in Nordjylland.

Figure 5. Accessibility to out-patient drop-in care during office hours in Nordjylland.

Figure 6. Accessibility to out-patient drop-in care during non-office hours in Nordjylland.

Figure 7. Accessibility of in-patient care in Nordjylland.

Figure 8. Accessibility of highly specialised care in Nordjylland.

South Karelia

Health care facilities

The region of South Karelia in Finland accommodates 12 health care facilities distributed across nine municipalities (Appendix 1). The number of facilities in each municipality is listed by category in Table 2, and their location is shown in Figure 9. The health care facilities are located in two groups. The out-patient care group consists of primary care, drop-in care during office hours and in non-office hours, while the in-patient care group includes in-patient care and highly specialised care.

Accessibility analysis

The results of accessibility analysis are presented in the following maps, with each map illustrating the accessibility of one health care service type. The colours represent car ride times in minutes from the place of residency to the nearest health care facility within a certain service type, with a range of between ten minutes to two hours for travel time. The health care facilities are also shown on the map.

The population in South Karelia is one-fifth of that in Nordjylland, and the region has 12 health care facilities in total, of which 11 provide primary out-patient care. A 10-minute car ride covers 89.7% of the regional population, while 99.0% of the population can reach a doctor within a half-

hour car ride (Figure 10). In terms of primary care, Lappeenranta is one of the municipalities with the most extensive accessibility across the region.

In South Karelia, 10 out of the 19 health care facilities provide out-patient drop-in care services during office hours. Over three-in-four (77.7%) inhabitants in the region are able to access drop-in health care during office hours within a ten-minute car ride, and a half-hour car ride covers the vast majority (98.4%) of the regional population (Figure 11).

Both drop-in care during non-office hours (24/7) and in-patient care are available in two health care facilities in the region. These are located in Lappeenranta and Imatra respectively, making the service more accessible in these two municipalities. Our accessibility analysis suggests that in-patient care is accessible to 63.5% of the population within a 10-minute car ride (Figure 12). The vast majority of the inhabitants (98.6%) can reach a hospital for in-patient care within a one-hour car ride. As the largest municipality in South Karelia, Lappeenranta is equipped with adequate health care resources. Most of these health care services are easily accessible for the inhabitants in the municipality, other than for highly specialised in-patient care. None of the 19 health care facilities in South Karelia offers highly specialised in-patient care.

Table 2. Health care facilities in South Karelia.

Municipality	Total number of facilities	Primary care	Drop-in care office hours	Drop-in care non-office hours	In-patient care	Highly specialised care
Imatra	1	1	1	1	1	0
Lappeenranta	4	3	4	1	1	0
Lemi	1	1	0	0	0	0
Luumäki	1	1	1	0	0	0
Parikkala	1	1	1	0	0	0
Rautjärvi	1	1	1	0	0	0
Ruokolahti	1	1	1	0	0	0
Savitaipale	1	1	1	0	0	0
Taipalsaari	1	1	0	0	0	0
South Karelia total	12	11	10	2	2	0

Figure 9. Location of health care facilities in South Karelia.

Figure 10. Accessibility of primary care in South Karelia.

Figure 11. Accessibility of out-patient drop-in care during office hours in South Karelia.

Figure 12. Accessibility of out-patient drop-in care during non-office hours and in-patient care in South Karelia.

Västerbotten

Health care facilities

In total 48 health care facilities were included in the accessibility analysis for Västerbotten in Sweden, eight of which are located outside the region (Appendix 1). Geographically, they are relatively close to the regional boundary, and inhabitants living along that boundary may seek health care services in the neighbouring regions. For primary health care services, people should not have to cross the municipal border, and certainly not the regional border. But for some hospital services, the nearest hospital may be used, regardless of whether it is located inside the home region or not.

The region accommodates 40 health care facilities distributed across 15 municipalities. The number of facilities in each municipality is listed by category in Table 3, and their location is shown in Figure 13. The health care facilities are located in two groups. The out-patient care group consists of primary care, drop-in care during office hours

and in non-office hours, while the in-patient group care includes in-patient care and highly specialised care.

Accessibility analysis

The results of our accessibility analysis are presented in the following maps, with each map illustrating the accessibility of one type of health care service. The colours represent car ride times in minutes from the place of residency to the nearest health care facility within a certain service type, with a travel time range of 10 minutes to two hours. The health care facilities are also shown on the map.

The 37 health care facilities in the region contribute to widespread coverage of primary out-patient care for the population in Västerbotten (Figure 14). Over 80% of the inhabitants can access such health care services within a 10-minute car ride, and a half-hour car ride can cover 95.8% of the regional population. In general, coastal

Table 3. Health care facilities in Västerbotten.

Municipality	Total number of facilities	Primary care	Drop-in care office hours	Drop-in care non-office hours	In-patient care	Highly specialised care
Bjurholm	1	1	0	0	0	0
Dorotea	1	1	1	1	1	0
Lycksele	3	2	1	1	1	0
Malå	1	1	1	1	1	0
Nordmaling	1	1	0	0	0	0
Norsjö	1	1	0	0	0	0
Robertsfors	1	1	0	0	0	0
Skellefteå	11	10	1	1	1	0
Sorsele	1	1	1	1	1	0
Storuman	2	2	2	2	2	0
Umeå	13	12	1	1	1	1
Vilhelmina	1	1	1	1	1	0
Vindeln	1	1	0	0	0	0
Vännäs	1	1	0	0	0	0
Åsele	1	1	1	1	1	0
Västerbotten total	40	37	10	10	10	1

Figure 13. Location of health care facilities in Västerbotten.

municipalities have easier access to health care services than inland municipalities. As one of the inland municipalities, Storuman accommodates one health care facility which provides most of the health care services expected in relation to highly specialised care.

Health care facilities offering out-patient drop-in care are characterised by even geographical distribution across Västerbotten (Figure 15). Each inland municipality has one such health care facility, apart from Norsjö. All ten facilities offer drop-in care during both office hours and evenings and weekends (24/7). According to the results of our accessibility analysis, 56.% of the regional population can access drop-in out-patient care within a ten minute car ride. Within a half-hour car ride, the drop-in care service is available to 83.3% of inhabitants.

The accessibility of in-patient care shares similar characteristics to that of access to drop-in out-patient care (Figure 16). The ten facilities mentioned above provide in-patient care, too. The only difference is that two facilities outside the re-

gion were included in the analysis. But they did not alter the overall picture, suggesting that inhabitants living along the border line tend not to cross the border to seek in-patient care. These hospitals are accessible to 56.3% of the population within a 10-minute car ride, and 97.1% of the population within a one-hour car drive.

The only hospital offering highly specialised in-patient care is located in Umeå, and half of the regional population (51.0%) can reach the hospital within a 40-minute car ride (Figure 17). For the inhabitants of Storuman, however it takes more than a two-hours car ride to access specialised care in the hospital. The accessibility of health care services for rural dwellers are improved by means of distance-spanning digital solutions. Instead of making the effort of physically visiting a health care facility, they can access video consultations with general practitioners via virtual health care rooms, and then decide whether a follow-up physical visit to the specialised hospital is needed.

Figure 14. Accessibility of primary care in Västerbotten.

Figure 15. Accessibility of out-patient drop-in care in Västerbotten.

Figure 16. Accessibility of in-patient care in Västerbotten.

Figure 17. Accessibility of highly specialised care in Västerbotten.

Virtual health rooms in Västerbotten

To secure better access to general practitioners for the rural population, the region of Västerbotten has developed the concept of virtual health rooms (VHRs). These VHRs are unstaffed, which means that they have no regular health personnel in situ. They are equipped with distance-spanning technology, which means that patients can go there to take consultations from a practitioner online, conducting health checks such as measuring blood pressure or heart rate. The first VHR was established in the village of Slussfors in 2014, as a part of a pilot project (Näverlo et al., 2016) and the Centre for Rural Medicine in the Västerbotten County Council primary care department has implemented a VHR evaluation framework. This research focuses on evaluation of patient perceptions of the usability of the VHR and its contribution to their health care. Methods: Nineteen of the 25 unique users of the VHR during 2014/15 completed a survey asking about their attitudes to their own health (using the 13-question version of the Patient Activation Measure (PAM). This unique service model has shortened the travel distance to primary care for inhabitants in the region,

as figure 18 shows. The coloured patches on the map show those populated areas in Västerbotten where inhabitants can expect a reduction of travel distance to primary health care through the implementation of VHRs. The coloured patches are populated areas in Västerbotten (by 1000*1000m grid) with improved accessibility of health care resulting from the implementation of virtual health rooms. The colour indicates the total distance reduced. Distance is measured as being via the road network.

The average distance to the closest primary health care facility (health centre or virtual health room) is 6 km for the overall population in Västerbotten. The implementation of VHRs means that around 3.5% of the 270,000 inhabitants of Västerbotten experience increased accessibility to a primary health care service. The travel distance for this portion of the population has been cut by almost 50%, from 42 km per person to 23 km per person. Patients may also use virtual health rooms to conduct teleconsultations with health professionals at specialised hospitals, which creates even greater potential from an accessibility standpoint.

Figure 18. Accessibility gains from virtual health rooms in Västerbotten.

Sogn og Fjordane

Health care facilities

In total, 35 health care facilities were included in the accessibility analysis for Sogn og Fjordane in Norway, four of which are located outside the region (Appendix 1). Geographically, they are relatively close to the regional boundary, and inhabitants living along that boundary may seek health care services in neighbouring regions. For primary health care services, people should not have to cross the municipal border, let alone the regional border. But for some hospital services, the nearest

hospital may be used, regardless of whether it is located inside the home region or not.

The region accommodates 31 health care facilities distributed in 26 municipalities. The number of facilities in each municipality is listed by category in Table 4, and their location is shown in figure 18. These health care facilities are shown in two groups. The out-patient care group consists of primary care, drop-in care during office hours and in non-office hours, while the in-patient care group includes in-patient care and highly specialised care.

Table 4. Health care facilities in Sogn og Fjordane.

Municipality	Total number of facilities	Primary care	Drop-in care office hours	Drop-in care non-office hours	In-patient care	Highly specialised care
Askvoll	1	1	1	0	0	0
Aurland	1	1	1	0	0	0
Balestrand	1	1	1	0	0	0
Bremanger	2	2	2	1	0	0
Eid	2	1	1	1	1	0
Fjaler	1	1	1	0	0	0
Flora	1	1	1	1	1	0
Førde	2	1	1	1	1	0
Gaular	1	1	1	0	0	0
Gloppen	1	1	1	1	1	0
Gulen	1	1	1	0	0	0
Hornindal	1	1	1	0	0	0
Hyllestad	1	1	1	0	0	0
Høyanger	1	1	1	0	0	0
Jølster	1	1	1	0	0	0
Lærdal	2	1	1	1	1	0
Leikanger	1	1	1	0	0	0
Luster	1	1	1	1	1	0
Naustdal	1	1	1	0	0	0
Selje	1	1	1	0	0	0
Sogndal	1	1	1	1	1	0
Solund	1	1	1	1	0	0
Stryn	2	2	1	0	0	0
Vik	1	1	1	1	0	0
Vågsøy	1	1	1	0	0	0
Årdal	1	1	1	0	0	0
Sogn og Fjordane total	31	28	27	10	7	0

Figure 19. Location of health care facilities in Sogn og Fjordane.

Accessibility analysis

The results of our accessibility analysis are presented in the following maps, with each map illustrating the accessibility of one particular health care service type. The colours represent car ride times in minutes from the place of residency to the nearest health care facility within a certain service type, with a travel range of between ten minutes and two hours. The health care facilities are also shown on the map.

In terms of accessibility, landscape plays a large role in Sogn og Fjordane. As a result of the region's mountainous landscape, accessibility is in general more limited. Half of the regional population (58.7%) can access one of the 28 facilities offering primary health care within a 10 minute car ride, and a half-hour car ride covers 89.7% of the population in total (Figure 19).

The accessibility of out-patient emergency care during office hours presents a similar picture to that of primary care, since 27 of the 28 primary care facilities also provide emergency care during office hours (Figure 20). The service is accessible to a slightly smaller proportion of the population (57.9%) within a ten-minute car ride, and 89.3% of

all people living in the region can access emergency health care during daytime.

With regard to out-patient drop-in care during evenings and weekends (24/7), accessibility is more limited compared to office hours provision (Figure 21). In total, 14 health care facilities included in the analysis were offering such a service, with four of them located outside the region. Approximately one-third of inhabitants (32.8%) can reach one health care facility within a ten-minute car ride when they need drop-in health care during non-office hours., these facilities are accessible to half of the regional population (51.8%) within half-an-hour by car, and 71.8% of the population can be covered by a one-hour car ride.

Despite the existence of seven health care facilities in Sogn og Fjordane, and three outside the region also providing in-patient care, accessibility is relatively restricted (Figure 22). Less than one-fifth of the regional population (18.4%) can access these hospitals within a half-hour car ride, while a one-hour car ride covers just over one-third of the population (35.7%). Luster municipality accommodates one of the health care facilities offering in-patient care, which also offers primary and emer-

Figure 20. Accessibility to primary care in Sogn og Fjordane.

Figure 21. Accessibility of out-patient drop-in care during office hours in Sogn og Fjordane.

Figure 22. Accessibility of out-patient drop-in care during non-office hours in Sogn og Fjordane.

Figure 23. Accessibility of in-patient care in Sogn og Fjordane.

gency out-patient care. The municipality therefore has relatively extensive accessibility of various kinds of health care, except highly specialised care.

None of the 31 health care facilities offers highly specialised in-patient care in Sogn og Fjordane. The closest hospital providing specialised care is in Bergen, but this cannot be accessed within a two-hour driving for inhabitants of the region. The accessibility of health care services for rural dwellers can be improved by means of distance-spanning digital solutions. Instead of making the effort to visit a health care facility physically, they can access video consultations with general practitioners via virtual health care rooms, and then decide if a physical follow-up visit to a specialised hospital is necessary. In addition, in case of a real emergency, helicopter ambulances are available in 11 hospitals around the country, including Bergen. In addition, vessel ambulances are widely used across Sogn og Fjordande.

Austurland

Health care facilities

The Eastern health region in Iceland covers the majority of Austurland region. It accommodates 11 health care facilities distributed across seven municipalities (Appendix 1). The number of facilities in each municipality is listed by category in Table 5, and their location is shown in Figure 23. These health care facilities are split into two groups. The

out-patient care group consists of primary care, and drop-in care during office hours and in non-office hours, while the in-patient care group includes in-patient care and highly specialised care.

Accessibility analysis

The results of our accessibility analysis are presented in the following maps, with each map illustrating the accessibility of one health care service type. The colours represent car ride times in minutes from the place of residency to the nearest health care facility within a certain service type, with a travel range of 10 minutes to two hours. The health care facilities are also located on the map.

Fjarðabyggð municipality accommodates five of the 11 facilities. All the other municipalities, apart from Fljótsdalshreppur, accommodate one health care facility each. Primary out-patient care is available in all the 11 health care facilities, covering 65.7% of the regional population within a 10 minute car ride (Figure 24). A large majority of inhabitants (87.7%) across the region can access primary care within a half-hour car ride, and a one-hour car ride covers a 97.5% of the regional population. Accessibility in Fjarðabyggð is relatively extensive, with five primary care facilities. Despite Fljótsdalshérað only accommodating one primary care facility, inhabitants have easy access to the service, since the facility is located in the most densely populated part of the municipality.

Table 5. Health care facilities in Eastern Iceland health region.

Municipality	Total number of facilities	Primary care	Drop-in care office hours	Drop-in care non-office hours	In-patient care	Highly specialised care
Borgarfjarðarhreppur	1	1	0	0	0	0
Breiðdalshreppur	1	1	0	0	0	0
Djúpavogshreppur	1	1	0	0	0	0
Fjarðabyggð	5	5	1	1	1	0
Fljótsdalshérað	1	1	0	0	1	0
Seyðisfjörður	1	1	0	0	0	0
Vopnafjarðarhreppur	1	1	0	0	0	0
Eastern health region total	11	11	1	1	2	0

Figure 24. Location of health care facilities in Eastern Iceland health region.

Figure 25. Accessibility of primary care in Eastern health region.

Out-patient drop-in care during both office and non-office hours (24/7) is only available in one health care facility in the region, and this is in Fjarðabyggð (Figure 25). This scarcity contributes to restricted access to the service. Approximately one-in-ten (11.5%) in the region can reach the drop-in care facility within a half-hour car ride, and it is accessible to less than half of the regional population (40.1%) within a one-hour car ride.

Fjarðabyggð and Fljótshálsað accommodate the two health care facilities which offer in-patient care. Almost one-third of the inhabitants (28.2%) can access one of these two facilities, if they need them, within a 10 minute car ride

(Figure 26). A half-hour car ride covers more than half of the regional population (59.3%), and a one-hour car ride covers 86.4% of the population in the health region.

None of the 11 health care facilities in East Iceland health region offers highly specialised in-patient care. The closest hospital providing specialised care is in Akureyri, and this facility cannot be accessed within a two-hour drive for inhabitants in the region. Akureyri is the centre for air ambulance services in Iceland and Greenland. These flights are staffed by emergency medical technicians/paramedics, and also flight physicians where necessary

Figure 26. Accessibility of out-patient drop-in care in Eastern health region.

Figure 27. Accessibility of in-patient care in Eastern health region.

Social care in the case study municipalities

Care of the elderly (both home care services and homes for old people) is primarily a municipal responsibility across all Nordic countries (Rostgaard *et al.*, 2015). A common characteristic of the Nordic countries is that health care and social care are to a large extent publicly funded. In the past 30 years, the trend has been to offer more home care services for the elderly and less institutionalised care in old people's homes and suchlike (Nomesco, 2017). Another trend moving in the same direction is that admissions to hospital have fallen in line with national strategies, and with more effective treatments which do not necessitate a stay at hospital. However, this in turn increases the need for home care support, as well as proximity to basic services such as grocery stores and pharmacies. Costs associated with home care for the elderly population are determined to a significant extent by the relationship between where the elderly population needing care resides, and the particular services offered in that location. The limits of what can be provided in terms of quality

in the social care sector are therefore geographic by nature, due to unavoidable transaction costs associated with the time it takes to travel for care personnel. In Swedish municipalities, the economic potential for introducing digital services is estimated to be savings of up to 50%, with metropolitan areas having the largest potential savings (Forzati & Mattson, 2014).

The focus of this section is on mapping and analysing demographic and geographical patterns in our case study municipalities, with regard to the accessibility of home care for the elderly. These patterns form the spatial pre-conditions for how local authorities can serve their elderly population with social care at home. The analysis here has been particularly focused on the population aged 80-years and over, since they are the main target group for at-home social care services. The accessibility of home social care for the elderly was assessed by applying a 'travelling salesperson' routing model to all localities where elderly people live. One route was generated for each municipality, with a starting point in the administrative centre of each. This gives an approximation of the travel

costs associated with providing care. Home care for the elderly population is organised in a wider range of different service solutions, depending upon local geographical and infrastructural contexts, as well as economic and demographic factors.

The results from our analysis are presented as a matrix involving four maps, in which the local context in terms of size and residential patterns of the elderly population is shown in the upper two maps. The first one shows the distribution of elderly 80-years-plus residents by absolute numbers, which is calculated using a so-called 'inverse distance weighted interpolation' (ref. detailed methodology appendix) method. The second map shows the proportion of the elderly population at a local administrative unit on a 5 km grid level (ref. detailed methodology appendix). Basic local service provision (in terms of pharmacies, food stores, nursing homes and other forms of assisted living) is shown on the third map, combined with the street network configuration. The fourth map in the matrix shows how a car-based travel route to reach the entire elderly population in these municipalities would be allocated. The calculated route is 'distance optimised', which means that the GiS

programme calculates the shortest route needed to reach all of the population grids where people of 80-years-plus resides. Both the point of departure and the end point for each route is set to one hypothetical care distribution hub in the main regional centre of each municipality. This type of calculation involves a fictive case whereby equal resources in terms of care operators (organised from the regional centre) would result in different transaction costs in terms of travel distance. Differences are determined by the geographical distribution of the elderly population and the configuration of the street network. Two accessibility indicators are presented in relation to the optimised route: the total length of the route, and the average distance between stops. A high total length of route, in combination with long distances between stops, means, in this model, a low accessibility of service and more 'problematic' cases. Measures to tackle constraints involved in long routes could include the decentralised allocation of care personnel hubs, or innovative transport solutions. It could also suggest larger benefits from the implementation of distance-spanning digital solutions for surveillance and care provision for elderly and disabled people living in their own homes.

Methodology for estimation of local distribution of 80+ people:

In the cases of Storuman, Lappeenranta and Austurland, the estimate for 80+ people could be carried out in a straightforward way, as data on 80+ people was provided on a one-by-one km grid level. The procedure consisted of two steps. In the first step, centroids of every grid cell were created. In the second step, these centroids were used as sample points for the IDW interpolation.

In the cases of Morsø and Luster, the estimation of 80+ people could not be carried out in a straightforward way, since data concerning the number of 80+ people was only available on a Sogn and Grunnkrets level. In order to carry out a local estimation of the distribution of 80+ people in these municipalities, values for this group were estimated using distributional

weights. These weights were calculated using data for the spatial distribution of the total population on a one-by-one km grid. It was assumed that in places where the total population is high, the number of older people will be higher. The total number of 80+ people within every Sogn and Grunnkrets was then distributed according to the total size of population in each cell belonging to that particular Sogn/ Grunnkrets. After this approximation, a so-called inverse distance-weighted interpolation (IDW) was carried out. This is a GIS method to estimate unknown values between sample locations and we have used it mainly for visual purposes. An IDW was carried out in same way for Luster, Storuman, Lappeenranta and Austurland.

Morsø

In 2019, 6.6% of Morsø's population of 20,403 people were in the age-bracket of 80 years or older, with the proportion being larger than that for Nordjylland region. Over the past decade the share of the population aged 80 years or over has increased steadily, but Morsø has seen a slightly steeper increase (Figure 27).

The population pattern in the island municipality of Morsø is fairly dispersed, with a comparably larger proportion of the population living outside urban settlements in detached private houses. The elderly population is no exception to this pattern. The largest concentration of population is in Nykøbing Mors, on the eastern side of the island.

This also accommodates the administrative centre of the municipality and is the main location for public services (Figure 28). The route calculation for Morsø shows that visiting health personnel starting in Nykøbing Mors need to travel 377 km to cover all addresses, which for a municipality with an area of only 364 km² might be considered to be rather long. It further underlines the dispersed residential pattern across the municipality. The average distance between stops is 1.66 km, suggesting that distance-related transaction costs for visiting elderly people in their own homes is rather low in Morsø compared to other municipalities in the study sample.

Figure 28. Elderly population of 80+ as a proportion of the total population in Morsø, Nordjylland and Denmark.

Figure 29. Mapping elderly care in Morsø.

Lappeenranta

The municipality of Lappeenranta is the largest one in the South Karelia region. The total population is 72,699, and 4,415 of those are 80 years or older which accounts for 6.1 % of the municipal population (Figure 29). The ratio in Lappeenranta is higher than in Finland, but lower than the regional ratio. The trend for the past decade shows an increase across all of these administrative levels.

The population pattern is concentrated in the town of Lappeenranta, which is the regional administrative centre, but also in the smaller town of Imatra, together accommodating a substantial

portion of the population. But as Figure 30 shows, the elderly population lives in all the Paavos (post code area) of the municipality. To serve all 4,415 elderly people with home care, including in the most distant parts with very few inhabitants (along the Russian border), home care staff would need to undertake a road trip of 821 km, as calculated from the centre of the municipality. The location of basic services like pharmacies and grocery stores is highly concentrated in urban centres, which suggests that elderly people with limited mobility in remote areas of the municipality are dependent on frequent visits from care personnel for the provision of their essential goods.

Figure 30. Elderly population of 80+ as a proportion of the total population in Lappeenranta, South Karelia and Finland.

Figure 31. Mapping elderly care in Lappeenranta.

Luster

Luster municipality is the largest municipality in the region in terms of land area, and it is home to 5,195 people. The proportion of 80+ year-olds in the municipality is on a slow decline over an 11-year period, and it is now around 6% of the total population of the municipality (Figure 31). The municipality is mountainous, with vast uninhabited areas. Settlements are located alongside the

Lustrafjord and Hafslavatnet. The municipality's only general practitioner's office is in the local centre of Gaupne, which also provides drop-in and emergency medical care outside office hours. The three care centres responsible for home care services and nursing homes in Luster municipality are shown in Figure 32.

The optimised route calculation shows a different pattern to most of the other municipalities

in the study. Although the total route required for covering all the elderly population in the municipality is not very long (about 221 kilometres), the average transport distance between stops is proportionately longer – 4.5 kilometres on average. This is shown in Figure 33. It can partly be explained by the physical geography and a 'fork-like' street and settlement structure which is difficult to negotiate.

tionately longer – 4.5 kilometres on average. This is shown in Figure 33. It can partly be explained by the physical geography and a 'fork-like' street and settlement structure which is difficult to negotiate.

Figure 30. Elderly population of 80+ as a proportion of the total population in Lappeenranta, South Karelia and Finland

Figure 33. The three district remits for home care service in Luster municipality – Gaupne, Hafslo and Luster.

Figure 34. Mapping elderly care in Luster.

Storuman

Storuman is in the northeast part of Västerbotten, close to Norway. In terms of geographic area, it is one of the largest municipalities in Sweden, with an area of 8,234 km². The population pattern in the municipality is clustered, with nearly 60% of living in the four urban settlements of Storuman, Stensele, Tärnaby or Hemavan. Storuman is the largest urban settlement, and it serves as the administrative centre. The municipality has an increasingly aging population structure, with the share of 80+ year or older exceeding 8% in 2019. This is a reality which inevitably puts pressure on the social care sector (Figure 34).

The routing calculation suggests that substantial travelling distances are required to reach the 484 elderly people in all parts of the municipality. It takes 710 km by car to cover all of them, with the average distance between stops being 7 km (Figure 35). A considerable number of elderly people live close to the municipal centre, but many also live outside the centre, spreading out across the municipality. This contributes to the relatively long distances involved, both in total travel time and in the distance between stops.

Figure 35. Elderly population 80+ as a proportion of total population in Storuman, Västerbotten and Sweden.

Figure 36. Mapping elderly care in Storuman.

Fjarðabyggð and Fljótsdalshérað

Fjarðabyggð and Fljótsdalshérað in Austurland, Iceland, are the two most sparsely populated municipalities in the study sample. Both municipalities have a lower proportion of population aged 80 years or more, with a share of just over 3% (Figure 36). In Fjarðabyggð, this means 161 individuals and in Fljótsdalshérað it means 118. There is no clear trend in the proportion of this population over an 11-year period, but during the past four years there has been a slight increase. These inhabitants are heavily concentrated in a few settlements: Egilsstaðir in Fljótsdalshérað, and Eskifjörður, Neskaupstaður and Reyðarfjörður in Fjarðabyggð.

The routing calculation starts from the town centre of Egilsstaðir. To reach the whole elderly population in the two municipalities from the cen-

tre of Egilsstaðir, a visiting care worker would need to travel 600 km, with an average distance between stops of 10 kilometres (Figure 37). This is the longest travel distance between stops observed in this study. These long distances, combined with very few elderly people in potential need of home care at each stop, shows why the transport cost is relatively high in these particular municipalities. From this perspective, implementation of digital solutions in the home care sector would be highly beneficial for this area. A persistent issue in rural Icelandic municipalities is that basic services like pharmacies and grocery stores are non-existent in many of the localities where elderly people are living. Distance-spanning care solutions will be needed to bridge this geographical mismatch.

Figure 37. Elderly population 80+ as a proportion of total population in Fjarðabyggð, Fljótsdalshérað, Austurland and Iceland.

Figure 38. Mapping elderly care in Fjarðabyggð and Fljótsdalshérað.

Cross-case comparison and conclusion

Out-patient primary care is the most accessible health care service for all our case study regions, and only the smallest regional difference can be observed, compared with other health care service types (Figure 38). Primary care is most accessible in Nordjylland, followed by South Karelia and Västerbotten. The service is least accessible in the Eastern Iceland health region and Sogn og Fjordane. For all regions, more than 80% of the regional population can access primary health care within a 20-minute car ride.

In terms of out-patient drop-in care during office hours, there is nearly full coverage of inhabitants in Nordjylland for a 20-minute car ride. By contrast, less than half of the regional population in the Eastern Iceland health region has accessibility of out-patient drop-in care during office hours within a one-hour car ride. There is only one health care facility offering such a service in the region. The accessibility patterns in South Karelia, Sogn og Fjordane and Västerbotten are similar, with over 80% of the regional population able to reach such a service within a half-hour car ride.

This study suggests a significant regional variation when it comes to the potential to access out-patient drop-in care during non-office hours, and in-patient care. Nordjylland, South Karelia and Västerbotten have relatively better accessibility, with over 80% of the regional population being able to reach out-patient drop-in care services during non-office hours within a half-hour car ride. The accessibility of out-patient drop-in care in non-office hours is more restricted in Sogn og Fjordane, with half of the regional population able to access such services within a half-hour car ride. Again, there is only one health care facility offering out-patient drop-in care during non-office hours in the Eastern Iceland health region, which makes the regional population there having the least accessibility to such services of all the five care study regions. Out-patient drop-in care during non-office hours is accessible to a mere 10% of regional inhabitants within a half-hour car ride.

With over 80% of the regional population being able to reach in-patient care within a half-hour car ride, accessibility for people living in Nordjylland, South Karelia and Västerbotten is widespread. Accessibility in the Eastern Iceland health region is more limited, but in-patient care is still accessible to 60% of the regional population within a half-hour car ride. By contrast, fewer than 20% of inhabitants can reach in-patient care in Sogn og Fjordane, partly due to the regional landscape, which is characterised by mountains and fjords.

The most limited accessibility is experienced by those needing highly specialised care, which is not reachable for inhabitants in South Karelia, the Eastern Iceland health region and Sogn og Fjordane within a two-hour car ride. This is partly because there is no such facility providing highly specialised health care in the region, and inhabitants have to seek such care in a neighbouring region. Nordjylland has the most extensive accessibility of highly specialised care, with more than 80% of the regional population able to access it within a half-hour car ride. Though accessibility in Västerbotten is more restricted compared to Nordjylland, more than half of the regional population can nevertheless reach such a health care facility within a one-hour car ride.

Regional inequality in accessing health care services is obvious from this study. Health care facilities, especially those offering in-patient care and highly specialised treatments, are most often located in densely populated urban areas and regional centres. Accessibility is relatively poor for inhabitants in sparsely populated rural areas. For some rural dwellers, it may take hours of driving to visit a general hospital. Transportation can be reduced for those with restricted access to health care services by means of distance-spanning digital solutions. Instead of making the effort to visit a health care facility physically, patients can access video consultations with general practitioners via virtual health care rooms, and then decide if a physical follow-up visit to a specialised hospi-

tal is necessary. Virtual health rooms are already in operation in Västerbotten, and the Mallu mobile health care clinic is available in South Karelia. These digital solutions can improve the overall efficiency of the health care system. They are, in general, more accessible than physical health care facilities for all who need a medical service.

An optimised routing exercise gives an approximation of the travel costs associated with providing care in our case study municipalities. Home care for the elderly population is organised according to a wide range of different solutions. These depend upon local geographical and infrastructural considerations, as well as economic and demographic factors. The standardised GiS processing approach utilised in this study does not provide insight into how care workers actually access the elderly in these municipalities. However, mapping does offer insight into the prerequisites of providing home care, and the costs associated with geographical and infrastructural factors and barriers. Long distances for travel, with long dis-

tances between local stops, all combined with a sparse and dispersed population pattern would, in this modelling, suggest a higher cost per elderly person in need of home care. This in turn could increase the incentives to implement digital solutions for this municipal sector. This problematic situation is especially evident in the case of Fjarðabyggð and Fljótsdalshérað, but also in Storumán, Västerbotten, as the analysis above shows. Integration of the road network is also an important factor for the effectiveness of these routes. Geographical barriers like mountains, forests and fjords set limits to how roads and settlement structures develop. A persistent issue in any implementation of distance-spanning solutions is access to basic service amenities. In contrast to solutions revolving around online consultation and surveillance, these are functions which cannot be replaced with digital access solutions. Geographical proximity will therefore continue to be an important factor.

Figure 39 (p. 55+56). Percent of population reaching health care services at different travel time breaks.

Figure 39 (p. 55+56). Percent of population reaching health care services at different travel time breaks.

Discussion

The accessibility analysis employed in this study was exclusively based on the motor vehicle as a mode of travel – which can either be private car or taxi, under different circumstances. However, other modes of transport could be more widely used to access health care service, for example public transport. Many people do not use private cars to visit the doctor, especially those who live in urban settlements. In cases of real emergency, helicopters or seaborne ambulances are available for that section of the population who have difficulties in reaching acute health care provision by road. Indeed, for some populated islands in the Nordic Region, the possibility of travelling by car to a desired location is very limited, and sometimes it is impossible. However, to be able to assess th

e potential geographic accessibility of different populated places in a standardised and comparative way, we have chosen the car as travel mode. This provides an estimate of the ease of access between different geographical locations and where people live. Factoring in all possible modes of transport currently in use is not feasible in terms of the kind of study conducted here. Our argument is that this analysis can serve as an indicator for accessibility by other means of transport utilising

the road network, such as buses (public transport) or taxi trips. That said, these are modes of transport that incur additional time penalties, ranging from departure schedules (bus) to response-arrival times (taxi). The maps here can also serve to highlight areas that are completely disconnected from the road network, and mainland services where local authorities would benefit from implementing a non-road-based form of mobility, as well as distance-spanning digital solutions for providing health care and other forms of care.

Our optimised routing exercise was based on the assumption that all care personnel depart from the municipal centre to reach all the those aged 80 and over residing in the municipality. This results in several limitations for the method. Firstly, how home care is delivered depends significantly on the way the social care sector is organised. In reality, care personnel depart from different hubs or locations. Secondly, it is also not the case that each person aged 80 and over will require home care. A more robust method would therefore be to access GPS data and retrieve actual driving distances for social care staff. If comparable data could be found in all municipalities, this would be an interesting avenue for future research.

Reference

Näverlo, S. et al. (2016) 'Patient perceptions of a Virtual Health Room installation in rural Sweden', *Rural and Remote Health*, 16(4), pp. 1–8.

Appendix 1

Denmark – Nordjylland									
ID	Name	Address	Municipality	Region	Primary care	Drop-in care office hours	Drop-in non-office hours	In-patient care	Highly specialised care
1	Jørgen Fischer	Boulevarden 16	Aalborg	Nordjylland	yes	yes	no	no	no
2	Lægerne Louise Plads	Louisegade 2 A,st th.	Aalborg	Nordjylland	yes	yes	no	no	no
3	Lægerne i Sjøllandsgade	Sjøllandsgade 34	Aalborg	Nordjylland	yes	yes	no	no	no
4	Lægerne Dronning Christines Vej	Dronn. Christines V. 26	Aalborg	Nordjylland	yes	yes	no	no	no
5	Lægerne ved Savers Plads	Dag Hammarskjølds G. 4,2	Aalborg	Nordjylland	yes	yes	no	no	no
6	Marianne Siersbæk og Nicolai Engel	Mellem Broerne 7,1.	Aalborg	Nordjylland	yes	yes	no	no	no
7	Lægerne Vesterbro Aps	Vesterbro 101,4.	Aalborg	Nordjylland	yes	yes	no	no	no
8	Poul H. Nygaard	Østre Alle 41	Aalborg	Nordjylland	yes	yes	no	no	no
9	Lægehuset i Hals	Havnegade 7 B,1 tv	Aalborg	Nordjylland	yes	yes	no	no	no
10	Lægerne i Nibe	Strandgade 1	Aalborg	Nordjylland	yes	yes	no	no	no
11	Lægerne i Svenstrup	Tingstedet 8	Aalborg	Nordjylland	yes	yes	no	no	no
12	Lægehuset i Vodskov	Vodskovvej 22	Aalborg	Nordjylland	yes	yes	no	no	no
13	Lægehuset Lille Borgergade	Lille Borgergade 4	Aalborg	Nordjylland	yes	yes	no	no	no
14	Gandrup Lægeklinik	Borgergade 39	Aalborg	Nordjylland	yes	yes	no	no	no
15	Lægerne Skrågade 13	Skrågade 13	Aalborg	Nordjylland	yes	yes	no	no	no
16	Lægerne i Gug	Gugvej 180	Aalborg	Nordjylland	yes	yes	no	no	no
17	Lægerne i Skalborg	Lindborgvej 93	Aalborg	Nordjylland	yes	yes	no	no	no
18	Lægekliniken Østerbro	Østerbro 107	Aalborg	Nordjylland	yes	yes	no	no	no
19	Lægerne Kennedy Arkaden	John F. Kennedys Pl. 1 E,5	Aalborg	Nordjylland	yes	yes	no	no	no
20	Lægerne Boulevarden 19	Boulevarden 19,1 th	Aalborg	Nordjylland	yes	yes	no	no	no
21	Lægerne Vejgård Torv	Vejgård Torv 1,1.	Aalborg	Nordjylland	yes	yes	no	no	no
22	Lægerne i Klarup	Klarupvej 7	Aalborg	Nordjylland	yes	yes	no	no	no
23	Birgitte og Terkel Lund Ovesen	Hasserisvej 106 st	Aalborg	Nordjylland	yes	yes	no	no	no
24	Hansen og Junge	Vingårdsgade 9,3.	Aalborg	Nordjylland	yes	yes	no	no	no
25	Kirsten Hallager	Peder P. Hedegårds V 6 A,st	Aalborg	Nordjylland	yes	yes	no	no	no
26	Dan K.-Hafstrøm	Vestergade 17	Aalborg	Nordjylland	yes	yes	no	no	no
27	Keld Gammelby Jensen	Lille Borgergade 27,st tv	Aalborg	Nordjylland	yes	yes	no	no	no
28	Per Hyldgård Jensen	Vestre Alle 11,st	Aalborg	Nordjylland	yes	yes	no	no	no
29	Eddie Nielsen Aps	Poul Paghs Gade 6 A	Aalborg	Nordjylland	yes	yes	no	no	no
30	Nytorv Lægeklinik	Østerågade 17	Aalborg	Nordjylland	yes	yes	no	no	no
31	Carsten Andreasen	Dag Hammarskjølds G. 4,1	Aalborg	Nordjylland	yes	yes	no	no	no
32	Mette Degn Larsen	Nørregade 4,1.	Aalborg	Nordjylland	yes	yes	no	no	no

33	Lægerne Aabos Plads	Dag Hammarskjølds G. 4,1	Aalborg	Nordjylland	yes	yes	no	no	no
34	Lægeklinikken i Centrum	Østerågade 9,1. th.	Aalborg	Nordjylland	yes	yes	no	no	no
35	Nick Rasmussen, Tornhøj-centret	Tornhøjvej 4,1.	Aalborg	Nordjylland	yes	yes	no	no	no
36	Elisabeth Kellmer	Vesterbro 101,1. tv.	Aalborg	Nordjylland	yes	yes	no	no	no
37	Morten Schliemann	Boulevarden 16,3. th.	Aalborg	Nordjylland	yes	yes	no	no	no
38	Lægerne Eternitten	Sohngårdsholmsvej 2,1	Aalborg	Nordjylland	yes	yes	no	no	no
39	Lægerne Boulevarden 30	Boulevarden 30,2.	Aalborg	Nordjylland	yes	yes	no	no	no
40	Lægerne Sofiendal	Sofiendalsvej 92,a	Aalborg	Nordjylland	yes	yes	no	no	no
41	Læge Mikkel Nordkap	Vingårdsgade 9,2.	Aalborg	Nordjylland	yes	yes	no	no	no
42	Lægerne Hasseris Bymidte	Thulebakken 22,1 tv	Aalborg	Nordjylland	yes	yes	no	no	no
43	Lægerne Budolfi Plads	Budolfi Plads 1,2 th	Aalborg	Nordjylland	yes	yes	no	no	no
44	Lægerne Vejgaard Sundhedscenter	Heimdalsgade 11	Aalborg	Nordjylland	yes	yes	no	no	no
45	Lægerne Sløjfen	Fyrkildevvej 7,1	Aalborg	Nordjylland	yes	yes	no	no	no
46	John Hyltoft	Ved Stranden 22,2 tv	Aalborg	Nordjylland	yes	yes	no	no	no
47	Familielægerne Aalborg	Gasværksvej 24	Aalborg	Nordjylland	yes	yes	no	no	no
48	alles Lægehus Aalborg	Vestre Havnepromenad 1 A,st tv	Aalborg	Nordjylland	yes	yes	no	no	no
49	Kim Villadsen	Skelagervej 379 C,1	Aalborg	Nordjylland	yes	yes	no	no	no
50	Lægecenter Storvorde	Stationsvej 9	Aalborg	Nordjylland	yes	yes	no	no	no
51	Aalborg Universitetshospital, Nord	Reberbansgade 15	Aalborg	Nordjylland	yes	yes	yes	yes	yes
52	Aalborg Universitetshospital, Syd	Hobrovej 18-22	Aalborg	Nordjylland	yes	yes	yes	yes	yes
53	Aalborg Universitetshospital - Havrevangen, Aalborg	Havrevangen 1	Aalborg	Nordjylland	yes	no	no	no	yes
54	Lægevagt Aalborg Sygehus	Hobrovej 18	Aalborg	Nordjylland	no	no	yes	no	no
55	Lægerne i Hjallerup	GI Markedsvej 3	Brønderslev	Nordjylland	yes	yes	no	no	no
56	Lægehuset Dronninglund	Stationsvej 10	Brønderslev	Nordjylland	yes	yes	no	no	no
57	Wiebke Otten	Gravensgade 42	Brønderslev	Nordjylland	yes	yes	no	no	no
58	Kenny Birk Bøtcher	Tolstrupvej 91,st,-1	Brønderslev	Nordjylland	yes	yes	no	no	no
59	Lægerne Bredgade	Bredgade 13,1.	Brønderslev	Nordjylland	yes	yes	no	no	no
60	Lægehuset Klokkeholm	Anemonevej 3	Brønderslev	Nordjylland	yes	yes	no	no	no
61	Christian Vejle	Tolstrupvej 91,st,-13	Brønderslev	Nordjylland	yes	yes	no	no	no
62	alles Lægehus Dronninglund	Nørregade 19	Brønderslev	Nordjylland	yes	yes	no	no	no
63	Cathrine Johannessen	Tolstrupvej 91,st,-18	Brønderslev	Nordjylland	yes	yes	no	no	no
64	Neuroenhed Nord, Brønderslev	Nørregade 77	Brønderslev	Nordjylland	no	no	no	yes	no
65	Lægerne Kirkepladsen 1 C	Kirkepladsen 1 C	Frederikshavn	Nordjylland	yes	yes	no	no	no
66	Lægehuset i Kvissel	Mejlingvej 3	Frederikshavn	Nordjylland	yes	yes	no	no	no
67	Lægerne Skovbrynet 1	Skovbrynet 1	Frederikshavn	Nordjylland	yes	yes	no	no	no
68	Karsten Ewald og Jette Kinch	Sct. Laurentii Vej 108 A	Frederikshavn	Nordjylland	yes	yes	no	no	no
69	Lægehuset Sæbygårdvej	Sæbygårdvej 11	Frederikshavn	Nordjylland	yes	yes	no	no	no

70	Flemming Lyng	Møldamvej 1	Frederikshavn	Nordjylland	yes	yes	no	no	no
71	Finn Thue Torp Aps	Strandvej 1 A	Frederikshavn	Nordjylland	yes	yes	no	no	no
72	Lægerne Aahaven	Gasværksvej 20	Frederikshavn	Nordjylland	yes	yes	no	no	no
73	H. C. Astrup	Rådhus Alle 52	Frederikshavn	Nordjylland	yes	yes	no	no	no
74	Lægerne Chrestensmindevej	Chrestensmindevej 1	Frederikshavn	Nordjylland	yes	yes	no	no	no
75	alles Lægehus Frederikshavn	Barfredsvej 83	Frederikshavn	Nordjylland	yes	yes	no	no	no
76	Østervrå Lægeklinik	Hjørringvej 444 B	Frederikshavn	Nordjylland	yes	yes	no	no	no
77	Lægerne Asylgade / Vesna Djordjevic	Asylgade 19	Frederikshavn	Nordjylland	yes	yes	no	no	no
78	Lægerne Asylgade / Charlotte Brun	Asylgade 19	Frederikshavn	Nordjylland	yes	yes	no	no	no
79	Lægerne Asylgade / Jacob Randrup	Asylgade 19	Frederikshavn	Nordjylland	yes	yes	no	no	no
80	Lægerne Asylgade / Mads Søndergaard	Asylgade 19	Frederikshavn	Nordjylland	yes	yes	no	no	no
81	Lægeklinikken Frederikshavn	Vestergade 47,a	Frederikshavn	Nordjylland	yes	yes	no	no	no
82	Lægerne i Dybvad	Markedsvej 12	Frederikshavn	Nordjylland	yes	yes	no	no	no
83	Regionshospital Nordjylland, Frederikshavn	Barfredsvej 83	Frederikshavn	Nordjylland	yes	no	no	yes	no
84	Skagen Gigt- og Rygcenter	Hans Baghs Vej 25	Frederikshavn	Nordjylland	no	no	no	yes	no
85	Lægevagt Sygehus Vendsyssel i Frederikshavn	Barfredsvej 83	Frederikshavn	Nordjylland	no	no	yes	no	no
86	Lægevagt Sygehus Vendsyssel i Skagen	Lunds Allé 6	Frederikshavn	Nordjylland	no	no	yes	no	no
87	Praktiserende Læger i Hirtshals Aps	Skovvejen 5	Hjørring	Nordjylland	yes	yes	no	no	no
88	Lægerne i Vrå	Vrejlevvej 54	Hjørring	Nordjylland	yes	yes	no	no	no
89	Tårs Lægehus	Bredgade 91	Hjørring	Nordjylland	yes	yes	no	no	no
90	Lægehuset i Bjergby	Skagen Landevej 76	Hjørring	Nordjylland	yes	yes	no	no	no
91	Harald Depcik	Kongensgade 11	Hjørring	Nordjylland	yes	yes	no	no	no
92	Lægerne Vestkysten I/S	Stationsvej 1	Hjørring	Nordjylland	yes	yes	no	no	no
93	Ais Egede Jensen	Tårsvej 57	Hjørring	Nordjylland	yes	yes	no	no	no
94	Lægeklinikken Vendia	Bispensgade 65,1.	Hjørring	Nordjylland	yes	yes	no	no	no
95	Lene-Marie Axelgaard	Mammutpladsen 5	Hjørring	Nordjylland	yes	yes	no	no	no
96	Lægerne Bispensgade	Bispensgade 65,st	Hjørring	Nordjylland	yes	yes	no	no	no
97	Lægerne Sverrigsgade	Sverrigsgade 2 B	Hjørring	Nordjylland	yes	yes	no	no	no
98	Lægerne H. Nygaard og K. Lauridsen	Strømgade 16	Hjørring	Nordjylland	yes	yes	no	no	no
99	Rikke Nyborg	Strømgade 16	Hjørring	Nordjylland	yes	yes	no	no	no
100	Marianne Stampe Henningsen	Kongensgade 11	Hjørring	Nordjylland	yes	yes	no	no	no
101	Jeanette Haagh	Kongensgade 11	Hjørring	Nordjylland	yes	yes	no	no	no
102	Louise Hjelm	Smutten 6,a	Hjørring	Nordjylland	yes	yes	no	no	no
103	Dinah Høngaard	Smutten 6 a	Hjørring	Nordjylland	yes	yes	no	no	no
104	Lægerne Vestergade	Vestergade 6	Hjørring	Nordjylland	yes	yes	no	no	no
105	Louise S. Grønhøj	Mammutpladsen 5	Hjørring	Nordjylland	yes	yes	no	no	no
106	Regionsklinik Hjørring 5	Aage Holms Vej 5	Hjørring	Nordjylland	yes	yes	no	no	no
107	Regionsklinik Sindal	Torvegade 6	Hjørring	Nordjylland	yes	yes	no	no	no

108	Regionshospital Nordjylland	Bispensgade 37	Hjørring	Nordjylland	yes	yes	yes	yes	no
109	Lægevagt Sygehus Vendsyssel i Hjørring	Bispensgade 37	Hjørring	Nordjylland	no	no	yes	no	no
110	Lægerne Postvænget 1, Åbybro	Postvænget 1	Jammerbugt	Nordjylland	yes	yes	no	no	no
111	Lægerne i Pandrup	Torvegade 6	Jammerbugt	Nordjylland	yes	yes	no	no	no
112	Lægeklínikken i Sulsted Aps	Doktorstien 5	Jammerbugt	Nordjylland	yes	yes	no	no	no
113	Kristof Zbroja	Sygehusvej 6 B,1	Jammerbugt	Nordjylland	yes	yes	no	no	no
114	alles Lægehus Brovst	Sygehusvej 6,b	Jammerbugt	Nordjylland	yes	yes	no	no	no
115	Nordic Medicare Lægeklíník Pandrup	Bredgade 130	Jammerbugt	Nordjylland	yes	yes	no	no	no
116	Dit Lægehus Fjerritslev	Aggersundvej 3	Jammerbugt	Nordjylland	yes	yes	no	no	no
117	Regionsklíník Læsø	Kirkestien 2	Læsø	Nordjylland	yes	yes	no	no	no
118	Mariager Lægeklíník I/S	Østergade 12	Mariager-fjord	Nordjylland	yes	yes	no	no	no
119	Lægehuset H. I. Biesgade 9	H I Biesgade 9	Mariager-fjord	Nordjylland	yes	yes	no	no	no
120	Onsild Lægehus	Viborg Landevej 52	Mariager-fjord	Nordjylland	yes	yes	no	no	no
121	Jørgen Bjerregaard Nielsen	Skelund Hovedgade 8	Mariager-fjord	Nordjylland	yes	yes	no	no	no
122	Jesper Jangaard	Blegen 4	Mariager-fjord	Nordjylland	yes	yes	no	no	no
123	Bolette Friderichsen	Korsgade 9	Mariager-fjord	Nordjylland	yes	yes	no	no	no
124	Lægeklíník Lone Vestergaard	Lindalsvej 15,st,-th2	Mariager-fjord	Nordjylland	yes	yes	no	no	no
125	Arden Lægehus	Blåkildevej 16	Mariager-fjord	Nordjylland	yes	yes	no	no	no
126	Lægerne Bendtzen og Sørensen	Adelgade 8,1	Mariager-fjord	Nordjylland	yes	yes	no	no	no
127	Lægerne Wigh og Sveistrup	Ved Stranden 2	Mariager-fjord	Nordjylland	yes	yes	no	no	no
128	Marisol Emborg	Korsgade 9	Mariager-fjord	Nordjylland	yes	yes	no	no	no
129	Ole Mogensen	Korsgade 9	Mariager-fjord	Nordjylland	yes	yes	no	no	no
130	Jesper Kolbeck	Lindalsvej 11,st,-tv2	Mariager-fjord	Nordjylland	yes	yes	no	no	no
131	Aalborg Universitetshospital, Hobro	Stolbjergvej 8	Mariager-fjord	Nordjylland	yes	yes	yes	yes	yes
132	Lægevagt Sygehus Himmerland i Hobro	Stolbjergvej 8	Mariager-fjord	Nordjylland	no	no	yes	no	no
133	Lægerne Bjerre & Jacobsen	Doktor Lunds Vej 2 B	Morsø	Nordjylland	yes	yes	no	no	no
134	Lægerne Søndergaard & Schmedes	Strandparken 48	Morsø	Nordjylland	yes	yes	no	no	no
135	Saxhøj Lægeklíník v/ Ole Lund	H. C. Ørstedes Vej 2 A	Morsø	Nordjylland	yes	yes	no	no	no
136	Stefanie Nolting	Strandparken 48	Morsø	Nordjylland	yes	yes	no	no	no
137	Regionsklíník Øster Jølby	Doktor Lunds Vej 2 A	Morsø	Nordjylland	yes	yes	no	no	no
138	Regionsklíník Nykøbing Mors	Strandparken 48	Morsø	Nordjylland	yes	yes	no	no	no
139	Lægerne i Terndrup	Birkevej 2 A	Rebild	Nordjylland	yes	yes	no	no	no
140	Lægehuset i Nørager	Jernbanegade 3	Rebild	Nordjylland	yes	yes	no	no	no
141	Lægerne i Øster Hornum	Torvet 4	Rebild	Nordjylland	yes	yes	no	no	no
142	Lægehuset i Skørping	Herman Bangs Vej 4	Rebild	Nordjylland	yes	yes	no	no	no
143	Lægehuset Solvang	Solvang 1 C	Rebild	Nordjylland	yes	yes	no	no	no
144	Lægehuset Støvring	Bavnebakken 101	Rebild	Nordjylland	yes	yes	no	no	no

145	Lægerne i Jernbanegade	Jernbanegade 7 A,1.	Rebild	Nordjylland	yes	yes	no	no	no
146	Laws Jespersen	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
147	Mikael Grønning Mikkelsen	Storegade 5 B,1 tv	Thisted	Nordjylland	yes	yes	no	no	no
148	Vestervig Lægepraksis	Vestergade 58	Thisted	Nordjylland	yes	yes	no	no	no
149	Toldbodlægerne	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
150	Lægerne i Nors	Bykernen 5	Thisted	Nordjylland	yes	yes	no	no	no
151	Marianne Kragh Rasmussen	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
152	Kirstine Agger	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
153	Søren Kæseler Andersen	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
154	Merete Hansen	Idrætsvej 5 A,1,-1	Thisted	Nordjylland	yes	yes	no	no	no
155	alles Lægehus Hurup	Idrætsvej 5,a,-1	Thisted	Nordjylland	yes	yes	no	no	no
156	Nordic Medicare Lægeklinik Thisted	Thylandsvej 37 b	Thisted	Nordjylland	yes	yes	no	no	no
157	alles Lægehus Frøstrup	Visdomsvej 1	Thisted	Nordjylland	yes	yes	no	no	no
158	Knut Rønning	Idrætsvej 5 a	Thisted	Nordjylland	yes	yes	no	no	no
159	Lægerne i Hundborg	Solgårdsvej 12	Thisted	Nordjylland	yes	yes	no	no	no
160	Anne Pelle-Klitgaard	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
161	William Baird	Sydhavnsvej 15	Thisted	Nordjylland	yes	yes	no	no	no
162	Regionsklinik Hurup	Idrætsvej 5	Thisted	Nordjylland	yes	yes	no	no	no
163	Aalborg Universitetshospital, Thisted	Højtoftevej 2	Thisted	Nordjylland	yes	yes	yes	yes	yes
164	Lægevagt Thisted Sygehus i Thisted	Højtoftevej 2	Thisted	Nordjylland	no	no	yes	no	no
165	Lægerne i Aalestrup	Aagade 25 a	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
166	Lægerne Nybovej 4	Nybovej 4	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
167	Lægerne i Løgstør	Fogedgade 3	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
168	Lægehuset i Hornum	Hasselvej 6	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
169	Lægehuset Dr. Ingridvej	Dr. Ingrid Vej 5	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
170	Lægehuset Østermarken	Østermarken 16	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
171	Lægeklinikken Aars	Banegårdsvej 2,1	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
172	Regionsklinik Ranum	Rønnevej 5 a	Vesthimmerlands	Nordjylland	yes	yes	no	no	no
173	Aalborg Universitetshospital, Farsø	Højgårdsvej 11	Vesthimmerlands	Nordjylland	yes	yes	yes	yes	yes
174	Lægevagt Sygehus Himmerland i Farsø	Højgaardsvej 11	Vesthimmerlands	Nordjylland	no	no	yes	no	no
175	Regionshospitalet Holstebro	Lægårdvej 12	Holstebro	Västjylland	yes	yes	yes	yes	no
176	Regionshospitalet Lemvig	Østergade 30	Lemvig	Midtjylland	yes	yes	yes	yes	no
177	Regionshospitalet Randers	Skovlyvej 15	Randers	Midtjylland	yes	yes	yes	yes	no
178	Regionshospitalet Skive	Reservevej 25	Skive	Midtjylland	yes	yes	yes	yes	no
179	Regionshospitalet Viborg	Heibergs Alle 5A	Viborg	Midtjylland	yes	yes	yes	yes	no

Norway - Sogn og Fjordane

ID	Name	Municipality	Region	Address	Primary care	Drop-in care office hours	Drop-in non-office hours	In-patient care	Highly specialised care
1	Askvoll Legesenter	Askvoll	Sogn og Fjordane	Helsehuset, 6980 Askvoll	yes	yes	no	no	no
2	Aurland Legekontor	Aurland	Sogn og Fjordane	Onstadvegen 25, 5745 AURLAND	yes	yes	no	no	no
3	Balestrand helsesenter	Balestrand	Sogn og Fjordane	Helsesenteret, 6899 Balestrand	yes	yes	no	no	no
4	Eid Legekontor	Eid	Sogn og Fjordane	Bøen 5, 6770 NORD-FJORDEID	yes	yes	no	no	no
5	Fjaler Legekontor	Fjaler	Sogn og Fjordane	Dalsvegen 81, 6963 DALE I SUNNFJORD	yes	yes	no	no	no
6	Førde Legesenter	Førde	Sogn og Fjordane	Langebruvegen 28, 6800 Førde	yes	yes	no	no	no
7	Gaular Kommunelegkontor	Gaular	Sogn og Fjordane	Kommuneliegane i Gaular, 6973 SANDE I SUNNFJORD	yes	yes	no	no	no
8	Gloppen Legesenter	Gloppen	Sogn og Fjordane	Grandavegen 9, 6823 SANDANE	yes	yes	yes	yes	no
9	Gulen Legekontor	Gulen	Sogn og Fjordane	Eivindvikvegen 1102, 5966 EIVINDVIK	yes	yes	no	no	no
10	Hornindal Legekontor	Hornindal	Sogn og Fjordane	Postboks 24, 6761 HORNINDAL	yes	yes	no	no	no
11	Hyllestad Legekontor	Hyllestad	Sogn og Fjordane	Kommunehuset, 6957 HYLLESTAD	yes	yes	no	no	no
12	Høyanger Legekontor	Høyanger	Sogn og Fjordane	Storgata 8, 6993 HØYANGER	yes	yes	no	no	no
13	Innvik legekontor	Stryn	Sogn og Fjordane	Dragesetvegen, 6793 Innvik	yes	no	no	no	no
14	Jølster Legekontor	Jølster	Sogn og Fjordane	Ospene 1, 6843 Skei I Jølster	yes	yes	no	no	no
15	Kommunelegen på Hauge	Bremanger	Sogn og Fjordane	Grotleveien 117, 6727 BREMAN-GER	yes	yes	no	no	no
16	Lærdal helsesenter	Lærdal	Sogn og Fjordane	Øyraplassen 8, 6887 LÆRDAL	yes	yes	no	no	no
17	Legegruppa SMS (Sunnfjord Medisinske Senter)	Flora	Sogn og Fjordane	Hans Blomgate 39, 6900 Florø	yes	yes	yes	yes	no
18	Leikanger legekontor	Leikanger	Sogn og Fjordane	Ohnstadhaugen 17, 6863 Leikanger	yes	yes	no	no	no
19	Luster legekontor	Luster	Sogn og Fjordane	Helsesenteret, 6868 Gaupne	yes	yes	yes	yes	no
20	Måløy Kommunelegkontor	Vågsøy	Sogn og Fjordane	Gate 164, 6700 Måløy	yes	yes	no	no	no
21	Naustdal Helsesenter	Naustdal	Sogn og Fjordane	Berrvellingene 32, 6806 Naustdal	yes	yes	no	no	no

22	Nordfjord sjukehus/ interkommunale legevakt	Eid	Sogn og Fjordane	Sjukehusvegen 14 6770 Nordfjordeid	no	no	yes	yes	no
23	Selje Legekontor	Selje	Sogn og Fjordane	Postboks 84 6740 Selje	yes	yes	no	no	no
24	Sogndal legesenter	Sogndal	Sogn og Fjordane	Plassen 2, 6856 SOGNDAL	yes	yes	yes	yes	no
25	Solund legekontor	Solund	Sogn og Fjordane	Helsesenteret, 6924 HARDBAKKE	yes	yes	yes	no	no
26	Stryn Helsecenter	Stryn	Sogn og Fjordane	Setrevegen 4, 6783 STRYN	yes	yes	no	no	no
27	Førde sentralsjukehus/ Sunnfjord og ytre sogn legevakt	Førde	Sogn og Fjordane	Svanehaugvegen 2, Bygg Aust 6812 FØRDE	no	no	yes	yes	no
28	Svelgen Helsecenter	Bremanger	Sogn og Fjordane	Granden 12, 6723 SVELGEN	yes	yes	yes	no	no
29	Vik legekontor	Vik	Sogn og Fjordane	Flatbygd 10, 6893 VIK I SOGN	yes	yes	yes	no	no
30	Årdal legekontor	Årdal	Sogn og Fjordane	Jotunvegen 4, 6884 Øvre Årdal	yes	yes	no	no	no
31	Lærdal Sjukehus	Lærdal	Sogn og Fjordane	Sjukehusvegen 9, 6887 Lærdal, Norge	no	no	yes	yes	no
32	Voss sjukehus	Voss	Hordaland	Sjukehusvegen 16, 5704 Voss, Norge	no	no	yes	yes	no
33	Haukeland University Hospital / Health Bergen	Bergen	Hordaland	Jonas Lies vei 65, 5021 Bergen, Norge	no	no	yes	yes	yes
34	Ålesund Sykehus	Ålesund	Møre og Romsdal	Åsehaugen 5, 6017 Ålesund, Norge	no	no	yes	yes	no
35	Norhordland legevakt	Isdalstø	Hordaland	Kvassnesvegen 48A, 5914 Isdalstø	no	no	yes	no	no

Sweden – Västerbotten

ID	Name	Municipality	Region	Address	Primary care	Drop-in care office hours	Drop-in non-office hours	In-patient care	Highly specialised care
1	Arvidsjaur hälsocentral	Sjukstugegatan 3	Arvidsjaur	Norrbotten	yes	no	no	no	no
2	Hortlax hälsocentral	Dammbrövägen 1	Piteå	Norrbotten	yes	no	no	no	no
3	Arjeplogs hälsocentral	Doktor Wallquists Väg 3B	Arjeplog	Norrbotten	yes	no	no	no	no
4	Piteå sjukhus	Lasarettsvägen 14	Piteå	Norrbotten	no	no	no	yes	no
5	Nya Närvården Hötting och Strömsund	Telegatan 8C	Strömsund	Jämtland	yes	no	no	no	no
6	Hälsocentralen Junsele	Forumvägen 4	Sollefteå	Västernorrland	yes	no	no	no	no
7	Hälsocentralen Husum-Trehörningsjö	Bruksvägen 187 D	Örnsköldsvik	Västernorrland	yes	no	no	no	no
8	Örnsköldsviks sjukhus	Sjukhusgatan 8	Örnsköldsvik	Västernorrland	no	no	no	yes	no
9	Norrlands universitetssjukhus	Daniel Naezéns väg	Umeå	Västerbotten	no	yes	yes	yes	yes
10	Skellefteå lasarett	Lasarettsvägen 29	Skellefteå	Västerbotten	no	yes	yes	yes	no
11	Lycksele lasarett	Hedlundavägen 20	Lycksele	Västerbotten	no	yes	yes	yes	no
12	Storumans sjukstuga hälsocentral	Backvägen 2	Storuman	Västerbotten	yes	yes	yes	yes	no
13	Malå sjukstuga hälsocentral	Storgatan 2	Malå	Västerbotten	yes	yes	yes	yes	no
14	Dorotea sjukstuga hälsocentral	Nygatan 19	Dorotea	Västerbotten	yes	yes	yes	yes	no
15	Sorsele sjukstuga hälsocentral	Burevägen 13	Sorsele	Västerbotten	yes	yes	yes	yes	no
16	Vilhelmina sjukstuga hälsocentral	Volgsjövägen 37	Vilhelmina	Västerbotten	yes	yes	yes	yes	no
17	Åsele sjukstuga hälsocentral	Bryggaregatan 11 A	Åsele	Västerbotten	yes	yes	yes	yes	no
18	Anderstorps hälsocentral	Anderstorpsleden 1	Skellefteå	Västerbotten	yes	no	no	no	no
19	Backens hälsocentral	Manusgränd 3	Umeå	Västerbotten	yes	no	no	no	no
20	Bjurholms hälsocentral	Storgatan 16	Bjurholm	Västerbotten	yes	no	no	no	no
21	Bolidens hälsocentral	Ringan 76	Skellefteå	Västerbotten	yes	no	no	no	no
22	Bureå hälsocentral	Nygatan 9	Skellefteå	Västerbotten	yes	no	no	no	no
23	Burträsk hälsocentral	Björnåkersgatan 10	Skellefteå	Västerbotten	yes	no	no	no	no
24	Byske hälsocentral	Ringvägen 8	Skellefteå	Västerbotten	yes	no	no	no	no

25	Capio hälsocentral Dragonen	Ridvägen 12	Umeå	Västerbotten	yes	no	no	no	no
26	Citymot-tagningen hälsocentral	Västra Norrlandsgatan 18B	Umeå	Västerbotten	yes	no	no	no	no
27	Erikslids hälsocentral	Annastigen 8	Skellefteå	Västerbotten	yes	no	no	no	no
28	Ersboda hälsocentral	Hälsogräd 3	Umeå	Västerbotten	yes	no	no	no	no
29	Heimdalls hälsocentral	Köpmangatan 15	Skellefteå	Västerbotten	yes	no	no	no	no
30	Holmsunds hälsocentral	Himmelska Fridens Torg 7	Umeå	Västerbotten	yes	no	no	no	no
31	Husläkarna Hälsocentral i Umeå	Storgatan 28 C	Umeå	Västerbotten	yes	no	no	no	no
32	Hörnefors hälsocentral	Bruksgatan 4	Umeå	Västerbotten	yes	no	no	no	no
33	Kåge hälsocentral	Nygatan 13	Skellefteå	Västerbotten	yes	no	no	no	no
34	Lövånger hälsocentral	Skogstorpsvägen 12	Skellefteå	Västerbotten	yes	no	no	no	no
35	Mariehems hälsocentral	Morkullevägen 9	Umeå	Västerbotten	yes	no	no	no	no
36	Medicinkonsulten AB	Skolgatan 8	Lycksele	Västerbotten	yes	no	no	no	no
37	Morö Backe hälsocentral	Höjdgatan 14	Skellefteå	Västerbotten	yes	no	no	no	no
38	Nordmalings hälsocentral	Hemvägen 12	Nordmaling	Västerbotten	yes	no	no	no	no
39	Norrlandskliniken hälsocentral AB	Glimmervägen 5 E	Umeå	Västerbotten	yes	no	no	no	no
40	Norsjö hälsocentral	Storgatan 33	Norsjö	Västerbotten	yes	no	no	no	no
41	Robertsfors hälsocentral	Fabriksvägen 3	Robertsfors	Västerbotten	yes	no	no	no	no
42	Stenbergsska hälsocentralen	Johan Skyttes väg 6	Lycksele	Västerbotten	yes	no	no	no	no
43	Sävar hälsocentral	Kungsvägen 4 A	Umeå	Västerbotten	yes	no	no	no	no
44	Tegs hälsocentral	Tegsplan 2C	Umeå	Västerbotten	yes	no	no	no	no
45	Vindelns hälsocentral	Storvägen 56	Vindeln	Västerbotten	yes	no	no	no	no
46	Vännäs hälsocentral	Umevägen 56	Vännäs	Västerbotten	yes	no	no	no	no
47	Ålidhems hälsocentral	Tvistevägen 2	Umeå	Västerbotten	yes	no	no	no	no
48	Tärnaby sjukstuga hälsocentral		Storuman	Västerbotten	yes	yes	yes	yes	no

Iceland – East Iceland Health Region

ID	Name	Municipality	Region	Address	Primary care	Drop-in care office hours	Drop-in non-office hours	In-patient care	Highly specialised care
1	Heilbrigðis- stofnun Austurlands Borgarfirði eystri	Heiðargerði	Borgar- fjarðarhreppur	Eastern Region	yes	no	no	no	no
2	Heilbrigðis- stofnun Austurlands Breiðdalsvík	Selnesi 44	Breiðdalshreppur	Eastern Region	yes	no	no	no	no
3	Heilbrigðis- stofnun Austurlands Egilsstöðum	Lagarási 19	Fljótsdalshérað	Eastern Region	yes	no	no	yes	no
4	Heilbrigðis- stofnun Austurlands Fáskrúðsfirði	Hlíðargötu 60	Fjarðabyggð	Eastern Region	yes	no	no	no	no
5	Heilbrigðis- stofnun Austurlands Vopnafirði	Laxdalstúni	Vopnafjarðarhrep- pur	Eastern Region	yes	no	no	no	no
6	Heilbrigðis- stofnun Austurlands Seyðisfirði	Suðurgötu 8	Seyðisfjörður	Eastern Region	yes	no	no	no	no
7	Heilbrigðis- stofnun Austurlands Reyðarfirði	Búðareyri 8	Fjarðabyggð	Eastern Region	yes	no	no	no	no
8	Heilbrigðis- stofnun Austurlands Eskifirði	Strandgötu 31	Fjarðabyggð	Eastern Region	yes	no	no	no	no
9	Heilbrigðis- stofnun Austurlands Neskaupstað	Mýrargötu 20	Fjarðabyggð	Eastern Region	yes	yes	yes	yes	no
10	Heilbrigðis- stofnun Austurlands Stöðvarfirði	Túngötu 2	Fjarðabyggð	Eastern Region	yes	no	no	no	no
11	Heilbrigðis- stofnun Austurlands Djúpavogi	Eyjalandi 2	Djúpavogshreppur	Eastern Region	yes	no	no	no	no

Finland – South Karelia

ID	Name	Municipality	Region	Address	Primary care	Drop-in care office hours	Drop-in non-office hours	In-patient care	Highly specialised care
1	HONKA-HARJUN TERVEYSASEMA	Honkahrju 4	Imatra	South karelia	Yes	Yes	Yes	Yes	No
2	SAMMON-LAHDEN TERVEYSASEMA	Torpanpel-lonkatu 2	Lappeenranta	South karelia	Yes	Yes	No	No	No
3	JOUTSENON HYVINVOINTIASEMA	Välskärintie 2	Lappeenranta	South karelia	Yes	Yes	No	No	No
4	ARMILAN terveysasema	Armilankatu 44	Lappeenranta	South karelia	Yes	Yes	No	No	No
5	ETELÄ-KARJALAN KESKUS-SAIRAALA	Valto Käkelän katu 1	Lappeenranta	South karelia	No	Yes	Yes	Yes	No
6	LEMIN TERVEYSKESKUS	Toukkalantie 3	Lemi	South karelia	Yes	No	No	No	No
7	LUUMÄEN HYVINVOINTIASEMA	Marttilantie 28	Luumäki	South karelia	Yes	Yes	No	No	No
8	PAIKKALAN HYVINVOINTIKESKUS	Lehmuskuja 3	Parikkala	South karelia	Yes	Yes	No	No	No
9	Rautjärven hyvinvointiasema	Viipurinkatu 6	Rautjärvi	South karelia	Yes	Yes	No	No	No
10	RUOKO-LAHDEN TERVEYSKESKUS	Nällisuontie 7	Ruokolahti	South karelia	Yes	Yes	No	No	No
11	SAVITAI-PALEEN TERVEYSKESKUS	Maitolantie 7	Savitaipale	South karelia	Yes	Yes	No	No	No
12	TAIPAL-SAAREN TERVEYSKESKUS	Muukkolantie 4	Taipalsaari	South karelia	Yes	No	No	No	No

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