

EMR/EHR Developments in the Nordics

October 2020

Signify Research will be publishing its new market report “Electronic Medical Records (EMR/EHR) - World” in December 2020. This white paper provides readers with an example of the country-level analysis from the report. Similar analyses are provided for 20 other countries/regions in the main report alongside market size estimates and forecasts by EMR/EHR type (national, regional, network, individual hospital, ambulatory only, etc) and feature-set (admin/operational functions, clinical functions, wellness/PHM functions, interoperability/data exchange functions, RCM/financial modules, etc.).

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EMR/EHR in the Nordics - White Paper

Introduction

This white paper takes the Nordic regional analysis from Signify Research's upcoming market report "Electronic Medical Records (EMR/EHR) - World - 2020". It is one of 20 different countries and regions on which a deep-dive analysis is presented. Within this white paper and for the above mentioned report, each regional analysis presents:

- ✓ An overview of the current EHR market status
- ✓ Information on which organisations are responsible for EMR procurement.
- ✓ Legislation driving future market developments
- ✓ An overview of the leading EMR vendors in the region/country
- ✓ Details of recent contracts awarded

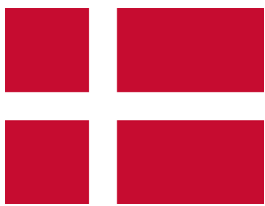
The above mentioned report also includes market estimates and forecasts for each regional market by EMR/EHR type (national, regional, network, individual hospital, ambulatory only, etc) and feature-set (admin/operational functions, clinical functions, wellness/PHM functions, interoperability/data exchange functions, RCM/financial modules, etc.).

including offering some level of risk stratification functionality. As well as EMRs used regionally/locally by municipalities, individual healthcare professionals and hospitals, there are several national platforms in use in Denmark.

Organisations Procuring EMR Solutions - Denmark	
MoH/Medcom	The MoH and Medcom are key organisations in the development of the national E-Journalen and P-Journalen initiatives.
Administrative Regions	The five regions are responsible for purchasing region-wide EMR solutions that are used in both acute and ambulatory settings . Contracts for the five regions were largely given during the period 2016-2018. Implementation for several are underway. The Northern Region will not be fully implemented until March 2022.
Local Municipalities	The 98 local municipalities are responsible for commissioning EMR solutions used for social care .
Individual hospitals and primary care facilities	Whilst the overall general direction of travel has been for the five regions to centrally purchase EMR solutions, some individual hospitals and primary care facilities still own and purchase their own EMR solutions.

Denmark

Current EHR Market Status



The use of EMRs is widespread and relatively mature in Denmark. The five regions now centrally purchase EMR solutions for use across all primary and secondary care settings, although implementation is still underway in most regions. Prior to 2013 there were approaching 30 different vendor EMR solutions used across Denmark. The move towards centralised purchasing in the five regions has reduced this significantly, although some independent systems are still being used by individual hospitals and primary care organisations.

There has also been significant effort over recent years to improve interoperability between the EMRs used throughout the healthcare system resulting in the National eHealth Authority and the Regionernes Sundheds-IT (RSI) being established. As well as there being widespread use of EMR solutions, the solutions used, particularly in primary care, tend to be advanced in terms of functionality,

The E-Journalen is a centralised database collecting hospital information from all the five Danish regions. This is supplemented by the P-Journalen which centralises data from GPs and other private healthcare professionals. There is also the Faelles Medicinkor which stores centralised information on patients' prescribed medication and vaccinations. These are hosted on the Sundhed.dk, a digital platform set up by the MoH in collaboration with the five regions and 98 local communes. The platform and the component elements can be accessed by professionals and patients via the NemID platform (a secure platform that acts as the gatekeeper).

Sundhed.dk was originally developed by the Maersk Data Consortium (consisting of LEC, ACURE, PLS/Ramboll and Bysted). Many elements of the wider EMR solution have been developed internally by Danish government, healthcare agencies and a dedicated development department that was set up (e.g. the ePrescription solution was provided by the Danish Public Health Institute). The fact that much of the system has been developed internally using existing IT, has enabled interoperability to be a central feature. However, other off-the-shelf EMR

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EMR Installations by Type and Vendor - Denmark		
Type	Vendors	Overview
National EHR	Maersk Data Consortium (consisting of LEC, ACURE, PLS/Ramboll and Bysted), supplemented by internally (e.g. Medcom) developed tools	The E-Journalen is a centralised database collecting hospital information from all the five Danish regions. This is supplemented by the P-Journalen which centralises data from GPs and other private healthcare professionals. A key organisation driving the adoption of eHealth in Denmark is Medcom, a publicly funded entity owned by the MoH, the regions and local government. It supported the development of P-Journalen and E-Journalen.
Regional EMR	Systematic, Epic	Systematic holds the contract for the Central Region (mid-Jutland), Northern Region (North Jutland) and South Region. The Southern Region contract was announced in May 2018. The North Region is its latest contract (Sept 2018) with the preparation phase initiated in March 2020, although the full implementation target of autumn 2021 has been pushed back to March 2022, due to delays caused by COVID-19. Epic became the provider for the Zealand region and Capital Region in 2016. However, implementation has been hampered with issues.
Individual Hospitals/ Primary Care/ Social Care	CGI, DMDC, IBM (formerly ACURE), DXC Technology, Origo, TietoEVRY (legacy Tieto business), CompuGroup Medical, MyClinic AS, Aver & Lauritzen ApS	A wide range of healthcare organisations use independently sourced EMR solutions from a long list of local and international vendors. This part of the market is expected to come under increased pressure as more purchasing is forecast to be centralised across the five regions. Social care will still remain the remit of the municipalities and open to more competition.

solutions are widely used within individual hospitals and tertiary care in Denmark resulting in continuing challenges maintaining the high level of interoperability.

The National eHealth Authority had put in motion a project to establish a platform to healthcare data exchange amongst different regions, municipalities and providers. However, this was abandoned for financial and technical reasons in 2013.

Future Developments

In January 2018, the MoH published its vision for how eHealth would develop in Denmark over the next four years in its “Digital Health Strategy 2018-2022” report. This set out five key areas where it expected IT to support developing health services in Denmark. The five focus areas were:

The patient as an active partner: This relates to a priority to expand the breadth of data patients can access electronically to include full medical records as opposed to their top-level health record (as is the case now). It is also intended that the patient will be able to view the full longitudinal record across all care settings and become a central partner in the development of their care plans. Tools will be developed to expand how patients can increasingly support themselves, e.g. decision support tool for cancer patients and a digital pregnancy tool for expectant mothers. Finally, patient reported outcomes will be captured to support value-based care outcomes

measurements. These initiatives will be supported via a major upgrade to the sundhed.dk platform.

Knowledge on time: This relates to an assessment of the frameworks and regulations that are barriers to the adoption of coherent patient pathways and is being driven by the need to improve care coordination between agencies. In terms of technology, this will drive the use of solutions that allow for greater data integration and better communication between healthcare agencies i.e. PHM and data aggregation tools. The plans state that new care management workflow tools will also need to be implemented at a primary care/GP level to support more efficient, high-quality and broader care coordination. The plan also states that for some of the knowledge on time objectives to be met, there will need to be a major upgrade to the central EMR platforms used across Denmark. Signify Research has assumed that budgetary approval has been given and that this will boost the overall EMR market from 2020 onwards.

Prevention: A core element of the prevention objective is the improved use of data and advanced analytics to manage populations and to use risk stratification tools to pre-empt disease, hospital readmission and rising risk. Several pilots have been put in place to evaluate technology, applications and the benefits of using these platforms before wider rollout. The prevention objective also demands that care management solutions that support care planning for COPD, diabetes and chronic

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lower back pain patients are rolled out at GPs from 2018. COPD is the first area where electronic care plans will be implemented with patients and professionals able to access the care plans via the sundhed.dk platform.

Trustworthy and secure data: This initiative focuses on placing the patient in control of which information is shared across the healthcare sector.

Progress and common building blocks: The focus is to ensure that IT is built on open, supplier-independent components linked by common standards.

Recent Contracts/ Vendor Activity

- ✓ Epic became the provider for the Zealand region and Capital Region in 2016. However, implementation has been hampered with issues.
- ✓ Systematic holds the contract for the central/ mid-Jutland Region, Southern Region and Northern Region (its latest contract - Sept 2018). COVID-19 has presented resourcing challenges for the progress of the Northern Regions' switch to the Columna Clinical Information System (locally referred to as NordEPJ) - the plan is for the regions' new EHR system to be ready in March 2022.

Finland

Current EHR Market Status



EMR solutions are used in all provider settings although the decentralised nature of the country's healthcare system has resulted in a wide range of EMR solutions being used

by different providers with some limitations on interoperability. Most of the local EMR market is served by CGI Group (via its 2012 acquisition of Logica), TietoEVRY (legacy Tieto business) and several smaller local vendors. CGI Group had previously supplied the EMR to all five of the Finnish university medical hospitals which tend to be the most advanced in terms of technology implementation. Epic is currently replacing one of these five university hospitals (Helsinki) in the Apotti region. Historically, international vendors/US EMR vendors have not had a significant share of the Finnish EMR market.

As well as the individual EMR solutions used by the local hospitals and primary care providers, Finland also

has a national EMR system. In 2002 the government took the decision that by the end of 2007 there should be a nationwide, interoperable EMR in place.

Organisations Procuring EMR Solutions - Finland	
Local Municipalities Health Care Centres	There are 192 local municipalities in Finland that are responsible for providing primary care. Ambulatory EMR solutions are, at present, purchased by these individual municipalities.
District Hospitals	There are 21 district hospitals in Finland responsible for specialised medical care. Acute EMR purchasing was previously made locally by these district hospitals in conjunction with the local municipalities.
University Hospitals	There are five university hospitals in Finland that had previously been responsible for commissioning their own EMR solutions.
Sote Areas	EHR procurement has transitioned away from the local Health Care Centres and District Hospitals and is coordinated by new integrated care networks called Sote-areas . These 19 to 21 Sote-areas will integrate care provided by the 192 local municipalities. In the short term, the development of Sote areas will create demand for more integration tools to allow data exchange between legacy healthcare IT.
Kela	The Finnish Social Insurance Institution (Kansaneläkelaitos) is responsible for the technical implementation and maintenance of the national EMR solution, Kanta. It is also responsible to setting the interoperability requirements of other local EMR solutions that interface with Kanta.

This is the Kanta system. The solution offers information exchange with the district hospital/other local EMR solutions, electronic referrals & discharge letters, ePrescription services, eArchive services, eAccess services (to professionals and the Finnish population) and access to patient summary data such as diagnoses, vaccinations, radiology results, risks, care plans, medication and consent management data. The solution integrates not only with public healthcare providers (acute, primary and social care), but also most private healthcare providers and pharmacies. The solution was designed to take a standards-based approach and complies with a variety of standards including HL7 V3 CDA R2. Fujitsu Services was the primary contractor for the Kanta system, with

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EMR Installations by Type and Vendor - Finland		
Type	Vendors	Overview
National EHR	Fujitsu Services	Fujitsu Services was the primary contractor for the Kanta system , with elements of the system development contracted out to other vendors such as EMC. The system has been in place since 2007 and offers in information exchange with local EMR solutions.
Acute EMR	TietoEVRY (legacy Tieto business) CGI Group Epic Cerner	There are 21 district hospitals in Finland. CGI Group and TietoEVRY are the main EMR vendors serving these. In September 2020, Cerner won a contract to supply four of the Sote-areas with Cerner Millennium and HealthIntent, in collaboration with Aster, a new regional authority with responsibility for health and social care in these four regions. Cerner is also partnering with IBM for its social services and social care platform to support non-clinical services (e.g. child adoption and housing). TietoEVRY (via its legacy Tieto business) had previously held the contracts for 11 of the district hospital regions making it the market leader, although it lost two of these to Cerner (Central Finland and Aster). Epic completed its first go-live in a hospital in the Apotti Region. However, its solution for other settings, including social care, suffered delays. The current plan is to integrate health and social care for >30% of Finland's population by the end of 2021.
University Hospital EMR	CGI Group	CGI Group had supplied the EMR to all five university medical hospitals in Finland. Epic is currently replacing one of these five (Helsinki University Hospital) in the Apotti region.
Primary Care/ Ambulatory EMR	CGI Group Others	Primary healthcare is provided by healthcare centres run by the 192 municipalities. The municipalities purchase primary care EMR solutions at present.

elements of the system development contracted out to other vendors such as EMC.

Future Developments

In 2015 the government published its social welfare and health care reform program. This included proposals to restructure how healthcare is provided in Finland creating larger autonomous areas (larger than the current municipalities) called "Sote-areas". The government intended that a maximum of 19 Sote-areas would be created (although the current plan has increased to 21). The municipality-based system had encountered significant issues developing high-quality, efficient healthcare services and the intention was that transferring to larger administrative service would address these problems and also allow the development of an integrated care system.

Health and social care services are to be brought together in these new areas creating a more integrated care management structure. Sote-areas will have their responsibilities refocused towards the wider management of the entire population, instead of just the sick. The original plan was to have the sote-areas established in 2019, although has been delayed until late 2020.

The delay is a result of some of the struggles that have taken place getting the reform act through the Finnish parliament. However, many of the delays focused on issues

relating to the increased use of private care providers and introducing more competition to healthcare provision, rather than the move to an integrated care model. Despite the government delays, some regions have already been set up independently of government legislation.

Core to the restructure was developing ICT in general and the Kanta system to support the integrated care approach and to better support populations in self-managing care and preventative care. The development of Sote-areas is expected to consolidate EMR purchasing.

In June 2020, the government drafted its next phase of plan for the reform program and provided a September 2020 deadline for the municipalities to provide feedback. The current plan is to divide Finland into 19 to 21 Sote-areas. In southern Finland there are plans for four provinces in Uusimaa, and Helsinki would also be a standalone region.

Recent Contracts/ Vendor Activity

- ✓ In September 2020, **Cerner** won a contract to supply four of the Sote-areas with Cerner Millennium and HealthIntent, in collaboration with Aster, a new regional authority with responsibility for health and social care in these four regions. Cerner is also partnering with **IBM** for its social services and social care platform to support non-clinical services (e.g. child adoption and housing).

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- ✓ The merger of Tieto and EVRY in December 2019 will likely help to strengthen Tieto's market leading position in Finland.

Norway

Current EHR Market Status



The Directorate of Health executes the political decisions which are implemented via four regional health authorities responsible for specialist care and 428 municipalities responsible

for primary care, GP care, public health, long-term care and rehabilitation. Hospitals are organised into 21 health enterprises (trusts) which act as service delivery units and are owned by the corresponding regional health authority. Although specialist care is run by these regional health authorities, primary care, including general practice, mental health care, nursing homes, rehabilitation, physiotherapy, and health promotion is still managed by the municipalities.

The four regional authorities have historically purchased their own EMR solutions, whilst aligning system functionality with national requirements. A local EMR supplier, DIPS, had been the primary healthcare IT supplier in many parts of Norway and is estimated that 70-80% of regional EMR implementations have been with the company.

DIPS has contracts with three of Norway's four regional health authorities, including five of the six university hospitals. The Northern authority and the Southern & Eastern authority signed contracts with DIPS for a new EMR solutions in 2012 with the Western regional authority also using the solution. All hospitals in these regions have an agreement to use the company's core products, DIPS Electronic Patient Journal (EPJ) and Patient Administration System (PAS).

Organisations Procuring EMR Solutions - Norway	
Directorate of Health	Developed the Kjernejournal in 2012. It is also responsible for setting the interoperability standards that the local EMR solutions need to adhere to in order to function alongside the Kjernejournal.

Organisations Procuring EMR Solutions - Norway	
Municipalities	There are 428 municipalities across Norway . Each has responsibility for managing primary and long-term/social care provision. Primary and long-term care EMR purchasing is commissioned locally at a municipality level , and in some cases in cooperation with other municipalities and the regional health authorities.
Regional Health Authorities	There are four regional health authorities that purchase EMR solutions for an entire region's acute care needs . The four authorities are Helse Nord, Helse Vest, Helse Midt-Norge and Helse Sør-Øst.

Cerner (via its acquisition of Siemens' EMR business) has the forth contract in the Central regional health authority with its DocuLive solution, although it pulled out of the renewal contract for the new "one patient – one record" EMR upgrade in early 2018. Cerner's decision to withdraw from Norway was largely driven by its long-term strategy of focusing on products that fit well within its Millennium EHR portfolio, rather than heavily developing the EHR solution it had previously acquired from Siemens.

The Central region had been identified as a testbed for the upcoming "one patient – one record" initiative. Originally three had been shortlisted - Cerner, Epic and DXC. Cerner withdrew from bidding for the contract in this region. Epic was left as the only vendor remaining and in 1Q 2019 was awarded the contract. As Epic's EHR and workflows had originally been developed for the US healthcare market, the challenges it has faced with other Nordic implementations (i.e. Denmark and Finland) and knowledge gained from these experiences appear to have improved Epic's understanding of requirements in Norway. In particular, the preparation process for integration and system testing in Norway has been considerably thorough, compared with Epic's implementation in Denmark. Additionally, the Norway implementation is being aided by the creation of a decision structure where issues/questions are responded to in a timely manner.

Although contracts for EMR procurement have already been allocated, there are still specific related product purchases that fall outside of these central contracts where opportunities still exist for other vendors. For example, the care coordination/messaging service IHR, supplied by TietoEVRY (legacy EVRY business), has been procured for use in Helse Sør-Øst and Helse Midt-Norge,

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EMR Installations by Type and Vendor - Norway		
Type	Vendors	Overview
National EHR	Accenture & partners	In 2012, Accenture was selected to roll out Norway's Kjernejournal (Summary Care Record) . The Kjernejournal provides a summary view of all of the Norwegian population's health records by aggregated data from regional/local EMRs. It can be accessed by primary, secondary, and long-term care providers, as well as the public. Kjernejournal is seen to some extent as a precursor to the "one citizen, one record" project discussed above.
Regional EMR	DIPS, TietoEVRY (legacy Tieto business), Cambio, DXC, CGI, Epic	DIPS holds the historic contracts with Helse Nord, Helse Vest and Helse Sør-Øst . Cerner withdrew from Helse Midt-Norge , having decided to not bid for the upgrade contract, which Epic won in 1Q 2019.
Primary Care/ Long-term EMR	ACOS(CosDoc), CGM, DXC, Hove Medical, Infodoc, Extensor, TietoEVRY (legacy Tieto business), Visma	There are some moves toward purchasing coordination/consolidation amongst the 428 municipalities of Norway. However, the large number and small scale has led to a fragmented supplier base of vendors serving the primary care market. TietoEVRY is estimated to be the leader in social care.

despite these regions using DIPS for EMR.

As well as local EMR implementations, a national patient record, named Kjernejournal, was also commissioned by the Norwegian Directorate of Health in 2012. This record effectively integrates data from local/regional EMRs to give a longitudinal view of the patient. Accenture was awarded with the contract and the solution has now been fully rolled out across Norway.

Future Developments

In 2012 a health reform (the Coordination Reform) was launched, aiming at better coordination of the health care services, both between primary and secondary care, and within each level of care. This reform will be a key driver of EHR upgrades over the forecast period, particularly in relation to data integration. DIPS was recently a beneficiary of this trend winning a NOK28M/USD3.4M contract with Helse Sør-Øst/Health South East for data integration tools to support connectivity between several legacy EMR solutions.

A key element of the reform is driving services to be directed more towards preventive care, and measures are taken to reduce the burden of changing demographics (increasingly older population, migration, overweight etc).

Focus areas of the reform included:

- ✓ Improve coordination and information exchange among care providers
- ✓ Reduce the need for expensive specialised care
- ✓ Increase the share of health services provided by primary care

Developments in the use of IT within the Norwegian

healthcare service are key in achieving these objectives. In particular, an emphasis was put on empowering patients using technology, developing a "one patient – one record" IT solution, reviewing health registry regulation.

Recent Contracts/ Vendor Activity

- ✓ Cerner pulled out of the renewal contract for the new Central Region "one patient – one record" EMR upgrade in early 2018 as it felt it could not justify a business case that would fully address the specific development requirements of the new platform. The Central region had been identified as a testbed for the one patient – one record initiative.
- ✓ Epic was awarded the contract for the Central Region in 1Q 2019.
- ✓ DIPS recently won a NOK28M/USD3.4M contract with Helse Sør-Øst/Health South East for data integration tools to support connectivity between several legacy EMR solutions.
- ✓ The South-Eastern Norway Regional Health Authority (Helse Sør-Øst) and EVRY have signed a new agreement for an electronic patient record solution in May 2018.

Sweden

Current EHR Market Status



By 2012 all regional councils in Sweden had fully implemented EMR solutions in hospitals, psychiatry and primary care. To increase

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cooperation and allow care providers to access patients' records stored at another provider, the National Patient Summary (NPÖ) was initiated in 2009. The key driver for the NPÖ was to enable health care staff to directly access patients' medical records from other healthcare providers, if certain legal requirements are fulfilled. All 21 regional councils' healthcare providers in Sweden implemented the NPÖ. The first regional contract awarded was to Finnish EMR vendor Tieto which contracted out the provision of HIE to InterSystems which supplied its HealthShare HIE/PHM product. The main goal of the NPÖ project was to provide integrated healthcare records across all providers, hospitals, and patients in all council regions. In 2016 the government and the Swedish Association of Local Authorities and Regions (SALAR) agreed on a vision for eHealth, signalling the end of the NPO and Tieto/InterSystems contract. SALAR is a members and employers' organisation representing all municipalities, county councils and regions in Sweden, with the aim of developing the welfare system and its services. Inera, which is owned by SALAR and is a national organisation funded by the regions, is responsible for procuring solutions in the regions and municipalities. The major vendors that have a significant market share in Sweden include Cerner (initially via its acquisition of Siemens' EMR business, followed by significant Cerner Millennium contracts for primary/acute care in Region Skåne and Västra Götalandsregionen), Cambio and CompuGroup Medical.

Organisations Procuring EMR Solutions - Sweden	
Municipalities	There are 290 municipalities in Sweden. These are each typically responsible for purchasing IT for long term care.
Regional Councils	There are 21 regional councils across Sweden responsible for acute/integrated care procurement. There are often occasions where municipalities within a regional council area coordinate EMR procurement across primary and acute care. For example, in 2018 Cerner was selected as the EMR supplier for the Region Skåne, where it will provide its Cerner Millennium solution to 10 hospitals and 190 primary care locations, straddling several municipalities.

A major focus of EMR deployment in Sweden has been the drive to ensure that there is coordination in relation to the ICT projects undertaken by the different regional councils. As part of this drive the Centre for eHealth in Sweden (CeHis) was established as a specialist eHealth ICT purchasing organisation that coordinates health IT purchasing across Sweden. In 2013 CeHis was incorporated into Inera.

Future Developments

"National eHealth - the strategy for accessible and secure information in health and social care" is one of the key policies driving the use of technology in Sweden. In its original iteration "The National eHealth Strategy", it was the driver for the NPÖ. More recently it is impacting how technology is being used for integrated care in Sweden. A key element of the strategy is how technology can be used to support coordinated care. In particular, it is driving the use of healthcare data analytics tools and smart decision support tools, such as the care management and care coordination tools. Specific to integrated care, there are several national initiatives that have been implemented that will impact how the EMR market develops in Sweden. These include projects such as:

Patient safety: coordinated approaches to reduce preventable adverse events associated with health and social care provision (e.g. hospital infection rates).

Integrated care for children and youth: coordinated approaches across maternity care, social care, dental care, police, pharmaceuticals, school health care, sexual health etc. with a focus on prevention and collaboration.

Care of sick elderly: development of systemic preventative care, coordinated alert systems, outcome analytics and results analysis.

National quality registries: development of approximately 100 national quality registries (with scorecard and visualisation tools for analysis outcomes), with a focus on understanding quality outcomes for care management processes for different patient cohorts.

Primary care: Using stratification tools to segment populations based on behaviours and preferences and understanding how primary care processes can be developed to improve outcomes, reduce waiting times and improve patient satisfaction.

IT: Evaluate how IT, such as patient engagement, ePrescription, online booking, patient communication and telehealth tools can support integrated care.

Recent Contracts/ Vendor Activity

✓ In June 2019, Cambio was awarded a significant regional contract to implement its COSMIC platform within the SUSSA regions. The 10-year contract is worth SEK 2.7Bn and will ensure support for one quarter of the Swedish population. The first five regions/counties to jointly procure the platform were Blekinge, Sörmland, Västerbotten, Västernorrland and Örebro, and in June 2020 the remaining four regions (Halland, Norrbotten, Dalarna and Gävleborg) also decided to join. The aim is to achieve the target of regional collaboration, as set in the E-Health Vision 2025.

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EMR Installations by Type and Vendor - Sweden		
Type	Vendors	Overview
National EHR	Inera	TietoEVRY and Intersystems previously supplied the EHR solution for the national patient summary record, NPÖ, to provide integrated healthcare records across all providers, hospitals, and patients in all regional councils. In 2016 this was replaced by SALAR owned Inera , a national organisation funded by the regions. Inera developed its own solution and is responsible for procuring solutions in the regions and municipalities.
Local Network EMR	TietoEVRY, Cerner, Cambio, CompuGroup Medical, Cerner	There are 21 regional councils in Sweden. Cerner, Cambio and CompuGroup Medical are the main vendors. Cerner's substantial contract wins in Region Skåne and Västra Götalandsregionen are particularly key achievements for the vendor, as it looks to cement its position in the Nordics. The tender for EHR procurement in Stockholm was scheduled for 2020, however delays caused by COVID-19 have put this on hold. Cerner will certainly feel confident of further success in Sweden once the procurement process for Stockholm resumes. In June 2019, Cambio's COSMIC implementation started in five SUSSA regions/ counties (Blekinge, Sörmland, Västerbotten, Västernorrland and Örebro), followed by the remaining four regions in June 2020 (Halland, Norrbotten, Dalarna and Gävleborg). In September 2020, Cambio selected TietoEVRY as its IT operations partner, to ensure regional support. Norrbotten County Council developed its own solution that was used commercially by two regions (Halland and Norrbotten), soon to be replaced by Cambio.
Primary Care/ Ambulatory EMR	CGI Group, Diarium/FNS, TietoEVRY (legacy Tieto business), Others	EMR commissioning is the remit of either the municipality or the regional council the municipality is part of.

Recent Contracts/ Vendor Activity

- ✓ In October 2017 Cerner was selected as the EMR supplier for the Region Skåne, where it will provide its Cerner Millennium solution to 10 hospitals and 190 primary care locations. The deal also includes Cerner's HealtheIntent PHM platform. The Region Skåne platform was due to go live in the middle of 2019, however it has experienced delays and is now scheduled for October 2021.
- ✓ Cerner added to this with a second Swedish regional contract in Västra Götalandsregionen in November 2018. Again, this was a region-wide contract for 17 hospitals and 200 primary care centres. Delays have pushed the go live back around 12 months to early 2022.

Conclusion

The Nordics is an advanced market in terms of EMR deployment and is well-served by several local entrenched vendors such as Cambio, DIPS and Systematic.

Over recent years international vendors have targeted the region in order to expand their geographic footprint. However, this has not always proven an easy route, illustrated by Cerner's withdrawal from the Helse Midt-Norge contract in Norway and implementation challenges experienced by Epic in Denmark. Both Cerner and Epic have certainly

made strides to cement their position in the Nordics, with significant regional contract wins for Cerner in Sweden and Finland, while Epic has made progress in Finland's Apotti region over the last 12-18 months. Epic was also the only vendor to hit the preselection criteria in Norway for the Helse Midt-Norge contract, which it won in 2019, suggesting that some progress may have been made in relation to prior implementation challenges. It is evident that market entry should not be taken without due consideration for local system demands, which often causes implementation delays.

Meanwhile, the merger of local vendors Tieto and EVRY in late 2019 has consolidated TietoEVRY's position as a leading EHR vendor in the Nordics (particularly in Finland and Norway), providing additional resources for future product development and potentially helping it become better placed to withstand the threat from international vendors.

As a region there is a big push to integrate primary, acute and, in some cases, long-term/social care provision and to centralise EHR procurement over large regions. Vendors that can offer enterprise-scale EMR solutions with a breadth of operational and clinical EMR tools, alongside PHM/ integrated care technologies (e.g. data integration tools, risk stratification tools and care coordination modules) are forecast to have the greatest level of success as the drive towards integrated care changes the expectations that providers will have of their EMR vendors.

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EMR/EHR in Acute and Ambulatory Applications - World - 2020 Publishing - December 2020

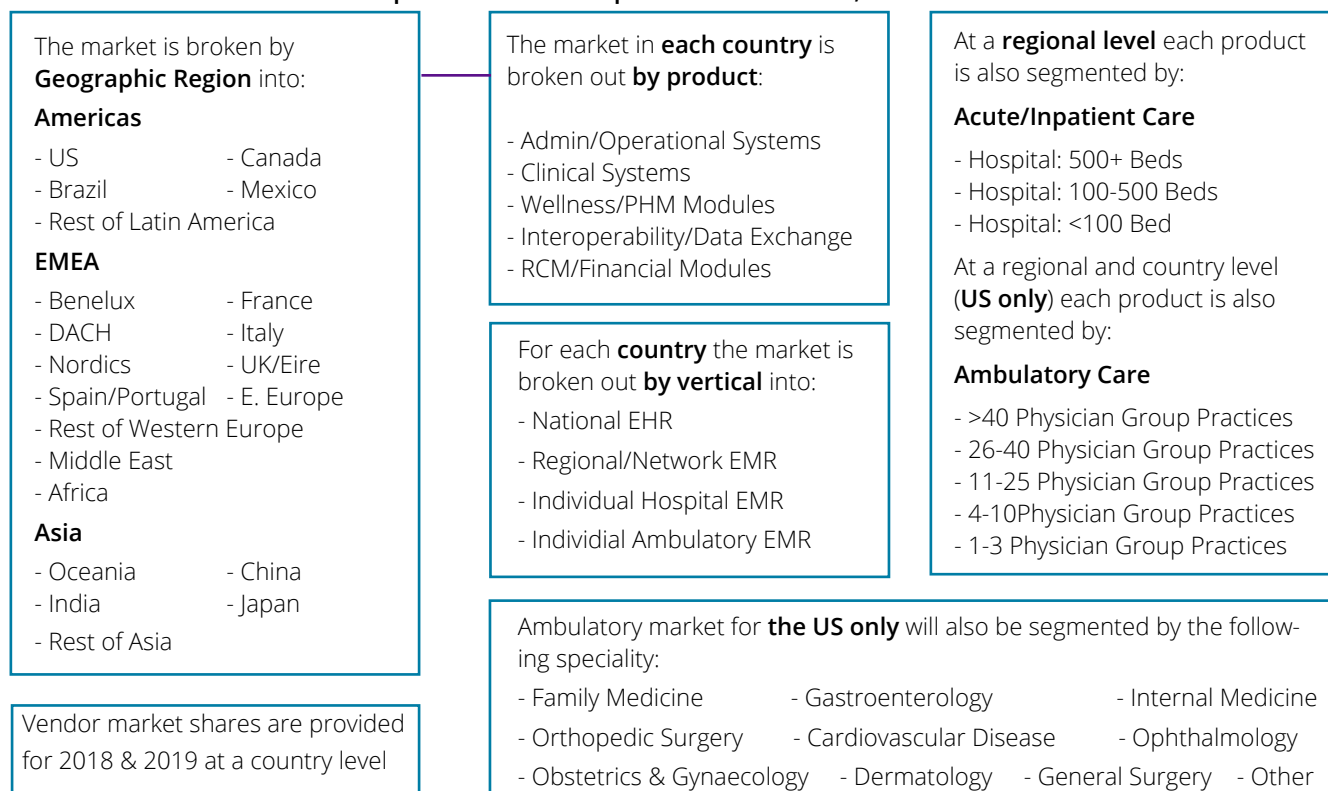
This white paper takes an extract from Signify Research's upcoming market report on the global EMR/EHR market. As well as descriptions of the market dynamics, similar to those presented in this white paper, the report will also include:

- ✓ Market forecasts in terms of revenues for the period 2019 to 2024 by country/region, product type and EHR/EMR type
- ✓ In-depth country profiles examining which organisations are purchasing EMR solutions in each country and what type of EMR solutions
- ✓ 45 vendor profiles of the leading global and regional EMR vendors
- ✓ A product matrix detailing the EHR products of more than 150 vendors with details on geographic market served, products offered and vertical markets served

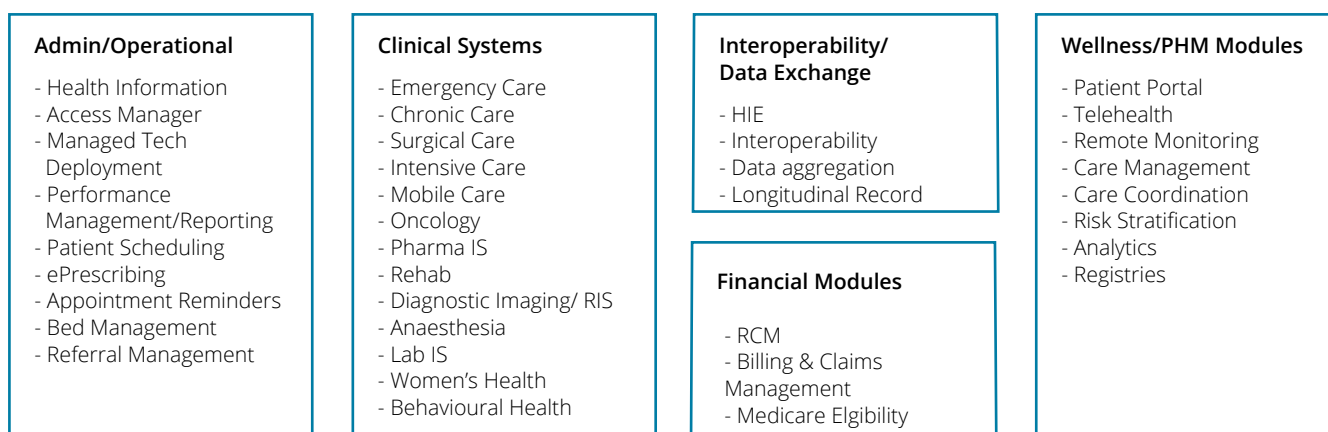
Report Content

The below diagram sets out the report scope and the data splits for the market estimates and forecasts. It also provides details on which other countries/regions will have a similar analysis to that presented in this white paper.

Market metrics are presented for the period 2019 to 2024, with historic data for 2018



Below are the definitions of which sub-products will be included in each of the product segments



EMR/EHR in the Nordics - White Paper

About Signify Research

At Signify Research we are passionately curious about Healthcare Technology and we strive to deliver the most robust market data and insights, to help our customers make the right strategic decisions. We blend primary data collected from in-depth interviews with technology vendors and healthcare professionals, to provide a balanced and complete view of the market trends.

Whether our research is delivered as an off-the-shelf report or as a consultancy project, our customers benefit from direct access to our Analyst team for an expert opinion when they need it. We encourage our clients to think of us as an extension to their in-house market intelligence team.

Our major coverage areas are Healthcare IT, Medical Imaging and Digital Health. In each of our coverage areas, we offer a full suite of products including Market Reports, Market Intelligence Services, as well as Custom Research and Consultancy services. Our clients include technology vendors, healthcare providers and payers, management consultants and investors.

"We recently purchased one of Signify Research's reports. We felt we can trust the insights they provided to make informed strategic decisions." – Vera Borislavova, Global Customer & Market Insight Business Partner, GE Healthcare

"Signify Research's greatest strengths are its subject matter expertise and deep understanding of the industry." – Ken Sutherland, President, Canon Medical Research Europe Ltd

Related Research & Products

Market Reports and Intelligence Services

Related reports to this White Paper include:



- EMR/EHR in Acute and Ambulatory Applications - 2020
- Ambulatory EHR Market - US - 2020
- Integrated Care & Value Based Care IT - World - 2020
- Telehealth (Acute, Community and Home) - World - 2020
- Decision Support Tools in Care Management & Patient Monitoring - 2020
- Imaging IT - World - Core Report (Rad IT, Cardiology IT, AV, VNA/IE, O&W) - 2020
- Digital Pathology - World - 2020
- Machine Learning in Medical Imaging - World - 2020
- High Acuity and Perinatal IT - World 2021

Custom Research

We offer a custom research service for clients who need information that cannot be obtained from our off-the-shelf research products or who require market data tailored to their specific needs. Our clients can leverage our wealth of existing market data and the knowledge of our highly experienced analyst team.



Consulting

For clients who require a more strategic, advisory engagement we offer a suite of consultancy services. Our consultancy work is research-based and draws on our existing market data and knowledge of the healthcare technology sector, to deliver targeted, meaningful and actionable strategic support to our clients.