# Development plan 2035
# Akershus University Hospital HF


AKERSHUS UNIVERSITETSSYKEHUS

UiO : Universitetet i Oslo

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# Summary

In order to ensure the population in the admission area a good hospital offer in the future and to create good professional environments, Akershus University Hospital has drawn up a plan for the development of operations and buildings for the period up to 2035.

The needs of the patients and the core business are leading for the building-related part of the plan. Economic sustainability will be decisive for the implementation of the measures that have been proposed. The tasks must be carried out in a way that creates scope for further development.

> Offers on diagnostics and treatment must be gathered around the patient. In the period up to 2035, thematic must be developed centers for cancer, hospital-based mental health care and geriatric medicine

**SIX MAIN OBJECTIVES**

Akershus University Hospital will meet the challenges until 2035 with the help of six main strategic goals:

- Strengthen the patient
- II Create good and safe patient processes
- III Strengthen specialized patient care
- IV Prioritize the offer within mental health and substance abuse treatment
- V Ensure sufficient personnel with the right skills
- VI Improve patient care through research and innovation

**THE PATIENT'S HEALTH SERVICE**

The health service must be developed with the patient at the centre. Patients must be able to influence decisions related to their own examination and treatment. Patient processes must be predictable and well coordinated. The interaction with other parts of the health service must be further developed, so that the patients feel that the offer at the different levels of treatment is coordinated and of high quality.

The plan highlights the following focus areas: Geriatric medicine, cancer diagnosis and treatment, the critically ill patient and mental health care and substance abuse treatment.

PHOTO: AHUS

### THEMATIC CENTERS

Offers on diagnostics and treatment must be gathered around the patient. In the period up to 2035, thematic centers for cancer, hospital-based mental health care and geriatric medicine will be developed. This will contribute to improving patient safety and resource utilization, while at the same time facilitating professional collaboration, research and competence development across specialties and occupational groups. The centers will be designed through step-by-step processes, which start with gathering some functions and building good interdisciplinary environments. Beyond the planning period, the aim is to develop the offer, towards the establishment of full-fledged centres. In a similar way, work must be done with a holistic approach to the critically ill patient.

### GOOD PATIENT PROCESSES

During the planning period, efforts will be made to establish more complete treatment courses, so that patients do not have to travel to other hospitals to receive parts of the examination and treatment. This will involve strengthening existing services, including through the acquisition of medical-technical equipment and the establishment of new functions, particularly elective (planned) specialized functions.

### ESTABLISHED AS A UNIVERSITY HOSPITAL

Investing in research, innovation and education will be the driving force for further development, and must be closely integrated with patient care. The university's function is to be strengthened, among other things, through clinical research along the large patient flows, and through the establishment of arenas for research collaboration across subjects, specialties and departments.

### AREAS ADAPTED TO PROFESSIONAL NEEDS

In order to realize centers for cancer and mental health care, it is necessary to construct new buildings. The buildings can be sized so that Akershus University Hospital also contributes to solving the future capacity challenges in the capital area.
Economic sustainability is the foundation for operation and development, and existing buildings must be used optimally.

# 1 Introduction

The core tasks of Akershus University Hospital are patient care, research, teaching and patient education. The hospital has most specialties in somatics, mental health care, drug addiction and addiction treatment.

The health enterprise Akershus University Hospital was established on 5 December 2001, when responsibility for the specialist health service was transferred from the county municipalities to the state. The regional health organization Helse Sør-Øst is the owner.

The somatic activities at Akershus University Hospital are mainly located at Nordbyhagen in Lørenskog municipality. In addition, there are daytime activities at the Ski hospital in Ski municipality. The mental health care and substance abuse division is the largest division at the health authority, and has operations both at Nordbyhagen and at a number of other locations in the admission area.

**TASKS AND AREAS OF RESPONSIBILITY**

In 2008, most hospital functions moved into modern premises at Lørenskog.

Today, Akershus University Hospital is Norway's largest local and regional hospital, with responsibility for residents from Romerike (13 municipalities), Follo (5 municipalities), the districts of Alna, Grorud and Stovner in Oslo, as well as Rømskog municipality in Østfold. In addition, the company is responsible for providing health services within mental health care and interdisciplinary specialized drug treatment for the municipality of Nes. Responsibility for Vestby municipality was transferred to Sykehuset Østfold in May 2018. With the phasing in of Kongsvinger hospital and associated admissions area in February 2019, the health institution will be responsible for approx. 575,000 inhabitants. Population growth is expected to be higher in the Akershus hospital area than anywhere else within Health South-East.
In 2035, the total number of inhabitants is expected to reach 690,000.

There are also other processes underway in Helse Sør-Öst that are important for the Akershus hospital area. In June 2016, the board of Helse Sør-Est decided to transfer the borough of Alna (50,000 inhabitants) to the Oslo hospital area, and that the boroughs of Grorud and Stovner should be included in the reception area of the new local and area hospital at Aker (board case 052/2016). There is no timetable for these transfers. Adjusted for these changes, the number of inhabitants in the admission area will be approx. 550,000 in 2035.

**MEETING THE FUTURE NEEDS OF THE POPULATION**

Akershus University Hospital has long been working on plans for further development, with a view to meeting the population's future needs and taking part in medical development.

At the end of the period for the strategic development plan 2012-2016, work was initiated on a new development plan.
The mandate was considered by the hospital management on 3 March 2015 (appendix 1). Helse Sør-Est laid down premises for the design of the planning document in connection with discussion meetings during the process (appendices 2 and 3).

The project has had a steering group led by the managing director, and a project secretariat led by the deputy managing director. Both hospital management, shop stewards, principal protection representatives and external stakeholders have been included in the steering group (see appendix 4). Before start-up, a stakeholder - analysis and prepared a plan for involvement (see appendix 5).
Several meetings and brainstorming sessions have been arranged where employees and others have contributed good input. These are incorporated into the document.

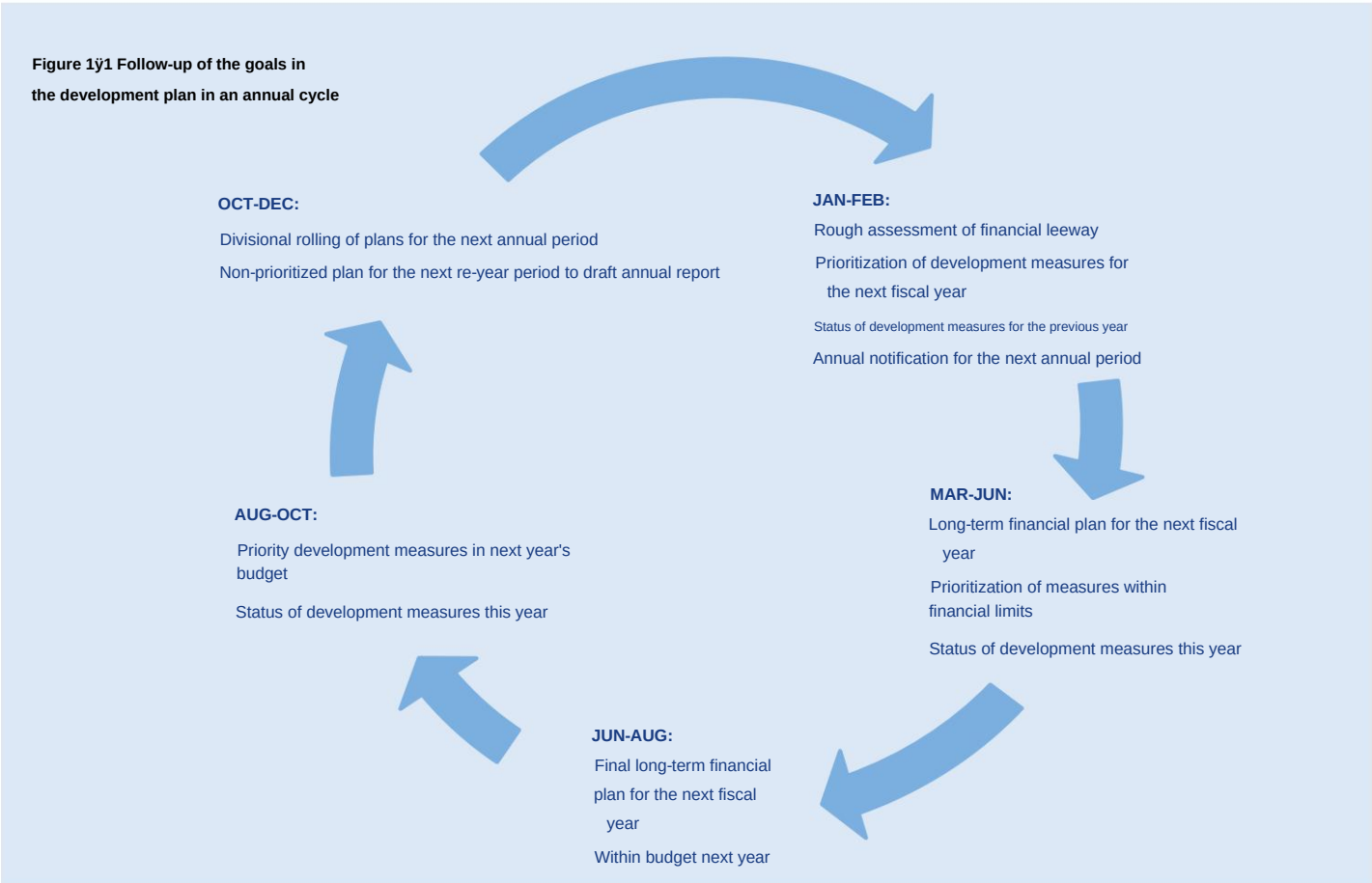
The planning document was adopted by the board of Akershus University Hospital on 14 December 2016 (case 94/16), and approved by Helse Sør-East in September 2017. As a basis for development in Helse Sør-East until 2035, it was determined in the spring of 2017 regional guides. Plans for Akershus University Hospital within the regional focus areas were submitted to Helse Sør-Øst as an additional document after the board's consideration on 28 February 2018 (case 08/18), and have since been incorporated into this development plan.

**OBJECTIVES FOR DEVELOPMENT OF BUSINESS AND BUILDING**

The development plan is based on the direction given in the strategic development plan 2012 – 2016, and sets out the company's main goals and plan for the development of operations and buildings until 2035.

The long-term goals will be followed up through measures in a four-year rolling strategy that is updated every year in connection with the work on the budget and long-term economic plan.

**Figure 1ÿ1 Follow-up of the goals in the development plan in an annual cycle**



# 2 Status and challenge picture

## Norwegian society will undergo major changes until 2035.

The hospital exists for the users, and it is necessary to develop the offer according to the patients' needs.

### 2.1 DEMOGRAPHY AND DISEASE DEVELOPMENT

**The need for specialist health services will be driven by population - developments in the admissions area.**

The development in the population, the age composition of the population, changes in the picture of illness and people's expectations of quality and standard will have great significance for the planning of future hospitals.

#### Population development

The population is growing significantly throughout the catchment area. Statistics Norway's population projections (MMMM) show a growth of almost 25 per cent until 2035. A stronger growth in the population of Romerike is estimated compared to the population growth in the Oslo districts and Follo.

#### Disease development

It is expected that population growth in the Akershus hospital area will lead to approx. 30-35 per cent increase in activity within the specialist health services, provided that current activities and needs do not change (SINTEF, 2014).

When projecting capacity needs, account must also be taken of operational changes as well as expected changes in the business due to medical professional development, new ICT and e-health systems, new forms of collaboration, lifestyle changes and changed user roles.

The incidence of various diseases varies between ethnic groups. In addition, there is great variation in the picture of the disease and the need for treatment across the age groups. In order to achieve the best possible user quality, it is therefore important to offer the specialist health services that the population in the admission area has the greatest need for. It is also necessary to organize patient services and communication about treatment for patient groups with special challenges, for example related to language.

**Figure 2-1 Expected population growth in the admission area 2017-35**

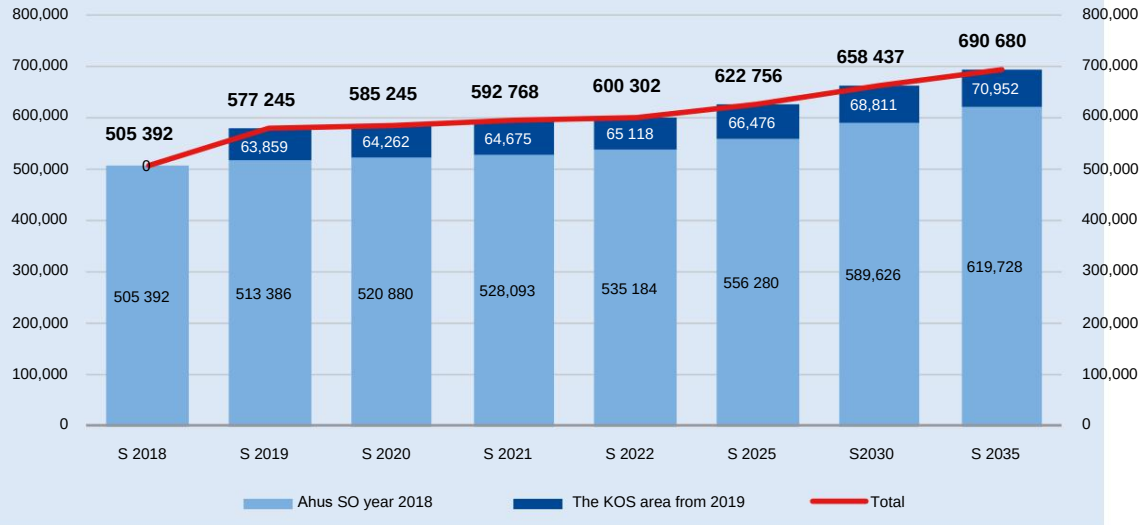
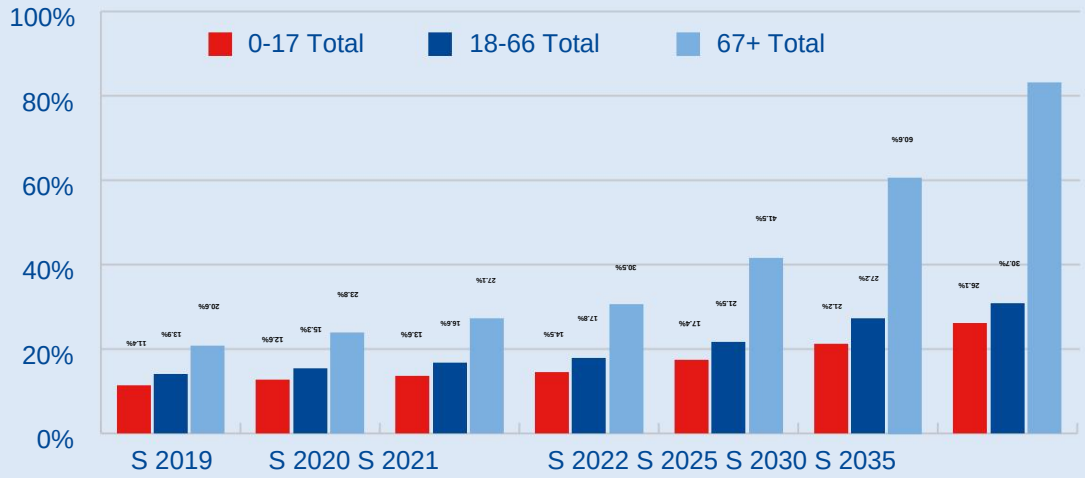


**Figure 2ÿ2 Cumulative population growth i Akershus hospital area by age group**




The proportion of elderly people over the age of 67 is increasing (figure 2-2). It is reasonable to assume that this will also increase the need for specialist health services. Activity growth could therefore be somewhat higher than population growth would indicate.

In connection with the National Health and Hospital Plan, it is estimated that the need for 24 -hour and day treatment will increase by approx. 60 per cent for the group over 65 years of age. Many of the older 60% of patients will have chronic and complex conditions. The 0-17 Overall, a particularly increasing need for services is expected for with 50% dementia, geriatric psychiatric conditions, heart and vascular disease, patients failure and cancer. 30% 20% The Cancer Registry has projected the incidence development for cancer based on expected population growth and age- 10% composition. In the Akershus hospital area, the 40% kidney number of new 0% cancer cases will increase by almost 50 per cent from around 3,000 in 2016 2017 2015 to 4,500 in 2030. Most of these will occur in the older part of the population.

An increasing proportion of the population experiences mental health problems. This particularly applies to young people and people with an immigrant background. The consumption of specialist healthcare services within mental health care and interdisciplinary specialized substance abuse treatment is greatest in the age group from 20 to 50 years, and will not be affected as much by the elderly wave.

In the coming years, an increased supply of critically ill patients is expected. With a large admission area, Akershus University Hospital has many emergency admissions. The number is assumed to increase in line with population growth. In addition, the increasing number of elderly people will contribute to more patients coming to the hospital with a critical illness.

## 2.2 USERS

**Knowledge of the users' experiences is central.**

When arranging for co-selection, good transitions and coping, it is particularly important to take the users along for advice.

**User participation** There is an active user committee, and users are represented in several 18-66 Total 67+ Total central councils and committees. User representatives also participate as observers in the health institution's board.

Akershus University Hospital also has a proud history when it comes to youth medicine. This is a project that has resulted in adapted areas, an active youth council and a transition program to improve the transition to adult medical services. The Youth Council has become an important player 2018 2019 2020 2025 2030 in the work for youth and young adults.

**Patient education**

Akershus University Hospital works purposefully with selected patient groups so that they can cope with everyday life with a chronic illness and a difficult life situation.

There is a need for systematic work with learning and coping both at the hospital and through collaboration with the municipal health service. Coping courses, bereavement support and information on user organizations and peer work are offered, among other things. In 2015, a peer office was established, where patients and relatives can meet others with experience from similar roles for advice and guidance.

Pusterommet is a training and activity offer for cancer patients, with the aim of reducing side effects, maintaining and improving physical fitness, as well as providing increased energy. It can also be a meeting place and social arena for patients in the same situation.

> Many of the older patients will have chronic and complex conditions

## User satisfaction

The patient experience survey PasOpp was introduced as a national measure in 2011. The survey is carried out by the National Knowledge Center for the Health Service.

A sample of 400 patients are sendt a questionare with 53 questions. The response rate is approximately 50 percent. Development of the results for Akershus University Hospital is shown in table 2-1 below. The next survey is planned to be carried out in autumn 2018, with publication in 2019.

**Table 2-1 Results for Akershus University Hospital at national level PasOpp survey 2012-15**

| Indicator 2012 2015 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|
| Information | 68 | 72 | 74 | 75 |
| The nursing staff | 71 | 72 | 73 | 73 |
| The doctors | 70 | 70 | 70 | 70 |
| Organization | 59 | 64 | 64 | 65 |
| Relatives | 69 | 75 | 73 | 76 |
| Standard | 74 | 76 | 75 | 77 |
| Discharge | 53 | 55 | 58 | 57 |
| Interaction | 54 | 63 | 56 | 65 |
| Waiting time | 56 | 57 | 58 | 60 |
| Patient safety | 85 | 85 | 84 | 84 |

The purpose of user experience surveys is to obtain information about the patients' experiences with the services. This will contribute to better business management, quality, consumer choice and information to the general public.

A central challenge with the PasOpp survey is that the results are only available one year after the responses have been obtained from the patients. In order to meet the need for information for use in improvement work, Helse Sør-East funded a PasOpp survey at departmental level in the autumn of 2015. However, the results of this survey were also only available one year after the implementation.

In November 2017, Health South-East adopted a regional strategy for quality, patient safety and HSE for the period 2018-2020.
During the strategy period, the focus on quality will be strengthened by prioritizing a strengthened patient role, quality-oriented management and reduction of unwanted variation. Improvement measures should be followed up through user experience surveys to see that the measures are working . The various clinical adopted solutions to obtain information at unit level, for use by inpatients treatment 120,000 in own improvement work.

## 2.3 ACTIVITY

**There has been a general increase in activity as a result of population growth. There has also been a shift towards** 20,000 **outpatient consultations rather than overnight stays.**

The annual increase in outpatient activity within mental health care and interdisciplinary specialized drug treatment has been greater than population growth.

**Figure 2-3 Development in the number of hospital stays for somatic diseases 2002-2017**

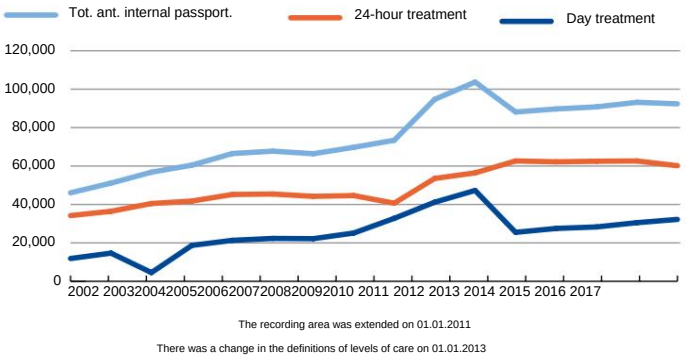



**Figure 2-4 Development in the number of outpatient consultations in somatics 2002-2017**

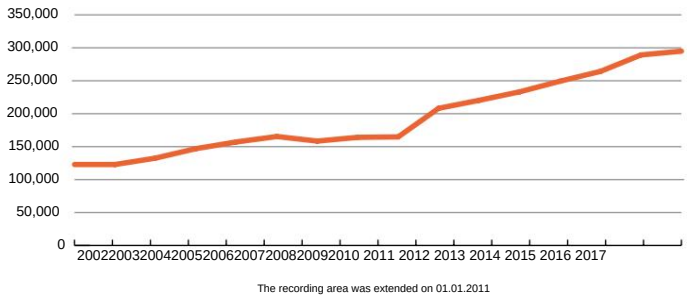
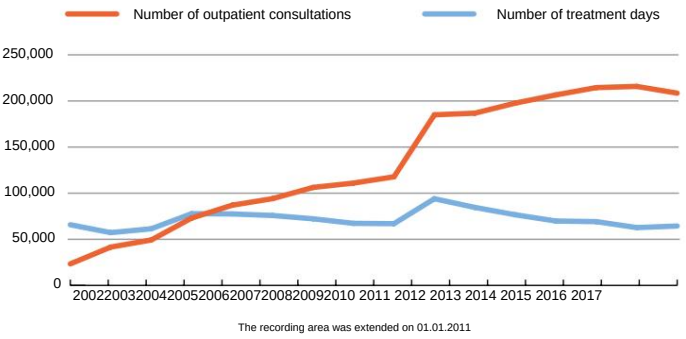



**Figure 25 Activity development within mental healthcare 2002-2017**



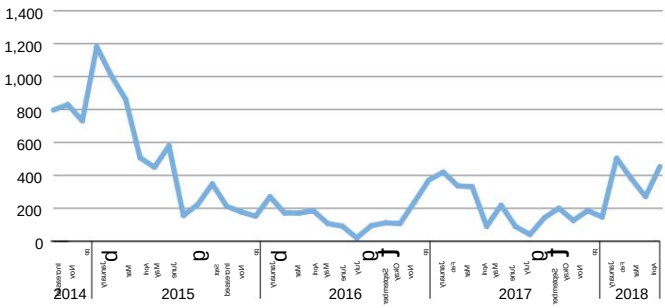
**Somatics**

An increasing influx of patients, combined with the change in the level of care from 24-hour to day and outpatient clinics, has led to increasing capacity needs in the outpatient clinics. Efforts have been made systematically to increase availability, as well as reduce waiting times, the number of missed deadlines and the number of patients waiting for an appointment. This has given good results.

The expansion of the admission area in 2011 led to the number of corridor overnight stays in the somatics quadrupling; from around 2,000 in 2010 to over 8,000 in subsequent years. This was unfortunate in terms of patient safety and quality, as well as the working environment and reputation. A number of measures were implemented to remedy the situation. In 2014, an agreement was signed with Diakonhjemmet hospital to accept 10 emergency admissions a day from the three districts in Groruddalen.
The agreement provided a relief equivalent to 28-30 beds, which contributed to a fall in the number of corridor patients from 2013 to 2014.

The business at Akershus University Hospital is characterized by a particularly high proportion of emergency admissions, which creates large fluctuations in occupancy. The situation was particularly challenging in the winter of 2014-2015. A number of measures were therefore implemented. Overall, this resulted in a sharp reduction in the number of corridor overnight stays (figures 2-6).

**Figure 2-6 Overnight stays on corridor October 2014 to April 2018**




The most important reason for increased capacity has been operational improvements, which has resulted in a reduction in the length of stay. Good flow throughout the process is essential to achieve efficient patient stays without unnecessary waiting time. The biggest bottlenecks now are the capacity in the emergency department, in the operating theaters and in the intensive care unit.

The critically ill patient must be guaranteed an offer that is flexible and correctly dimensioned. Efforts are being made to strengthen collaboration across the units to ensure the best possible patient treatment and optimal utilization of resources.

**Mental healthcare and interdisciplinary specialized drug treatment**

Treatment for people with mental disorders and drug addiction is offered on a local basis at district psychiatric centers (DPS), and centers for child and adolescent psychiatry (BUP) and drug and addiction (ARA). In addition, treatment is offered at the hospital for the sickest patients.

In recent years, Akershus University Hospital has shifted from mainly hospital-based treatment to local-based services, and from 24-hour to day treatment, outpatient and ambulatory consultations. This development is in line with the guidelines in the national health and hospital plan and national development. On a national basis, the number of outpatient consultations for adults has doubled over a 15-year period, while the number of days spent in hospital has decreased.

Akershus University Hospital operates local services in four areas; Groruddalen, Follo, Lower Romerike and Upper Romerike. These have a somewhat different profile, as a result of differences linked to history and pace of development. The use of the offers also varies between areas. After the expansion of the hospital area in 2011, a process was started to design the locally-based services as equal offers. There has also been a development where certain special areas have been divided thematically, rather than geographically. This applies, for example, to eating disorders, where Follo DPS has built up a 24-hour service for the entire admission area, as well as obsessive-compulsive disorders, which are looked after by Nedre Romerike DPS.

While the population's usual needs at specialist health service level must be covered locally, the hospital's task is to look after rare or particularly complicated conditions. With the introduction of package procedures for mental health care, there will be a great need for coordination between departments, hospitals and different levels of treatment. It is therefore a goal to further develop the locally-based services at the same time as the hospital functions are brought together at Nordbyhagen. As of today, there is insufficient capacity at Nordbyhagen for geriatric psychiatry, security psychiatry and psychosis treatment. This is partly solved by using rented premises at Skytta in Nittedal municipality and owned premises at Lurud in Skedsmo municipality, partly through the purchase of places at Oslo University Hospital.

**Health atlas and consumption rates**

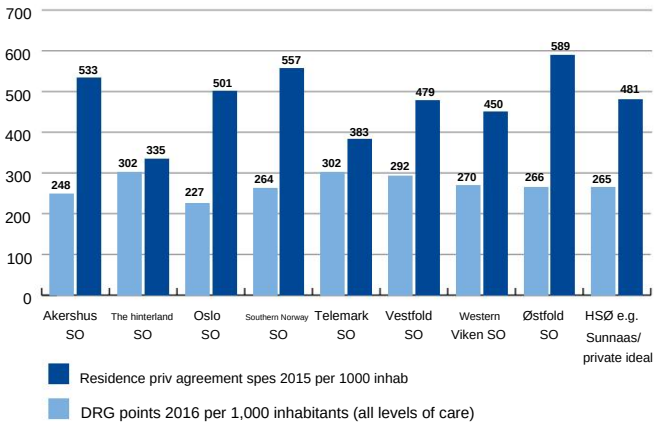
Two health atlases have been prepared based on information from the Norwegian Patient Register; children's health atlas and health atlas for day surgery. The atlases show an overview of health services provided to people in different residential areas in Norway, with the aim of uncovering differences in practice and differences in provision.

In a long-term perspective, it is desirable to develop the offer so that it appears equal for the whole country. The results can be useful in the work to further develop the individual subject areas.

The health atlases can also provide an overview of the distribution between use of private and public specialist healthcare services. The variation in consumption of hospital services between hospitals - areas are expressed in consumption per 1,000 inhabitants (consumption rates). The population in the Akershus hospital area had the second lowest consumption rates in Health South-East for all activities in 2016, which may be due to the relatively young population (figures 2-7). Expected population growth and more elderly people will lead to a greater increase in the consumption of specialist healthcare services in the future.

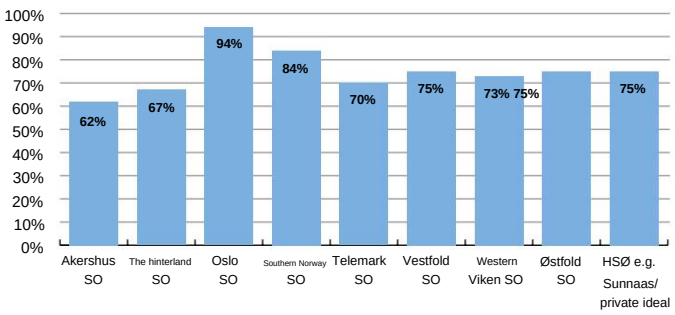
> With the introduction of package procedures for mental health care, there will be a great need for coordination between departments, hospitals and different levels of treatment

**Figure 2-7 Consumption rates per 1,000 inhabitants**




The degree of self-recovery within the somatic activities is lower for Akershus University Hospital than for other hospitals in Health South-East with which it is natural to compare. In 2016, the population in the Akershus hospital area received only 62 per cent of their examinations and treatments from Akershus University Hospital (figure 2-8). The flow of patients out of the hospital area is considerably greater than what can be attributed to regional and national functions. This particularly applies to planned treatment. There is a lower rate of self-coverage for surgical treatment services than there is for medical ones.

**Figure 2-8 The out-of-pocket coverage for the health institutions in Helse Sør-Öst in 2016**




Systematic work is being done to strengthen selected area functions. By this is meant functions that are only slightly specialized or linked to such small areas of expertise that they are only performed at one of the hospitals in hospital areas with several hospitals. The elective offers at the orthopedic clinic are actively marketed to the population and primary care doctors in the admission area. A new PCI laboratory received the first elective heart patients in November 2015. The neurology department has strengthened the area hospital's offer for epilepsy patients by establishing long-term monitoring with EEG, so that this patient group can have a wider local offer.
Previously, this investigation was carried out centrally at the department for complex epilepsy at Oslo University Hospital.

The self-coverage rate for mental health services is generally good. However, there is a very low rate of self-coverage for services within interdisciplinary specialized drug treatment. As much as 70 percent of the inpatient days within interdisciplinary specialized drug treatment are in the private institutions.
It is a challenge in the work to offer good and coherent treatment courses, where cooperation between the municipality, polyclinics and inpatient facilities is a prerequisite.
As for most other healthcare organizations in the region, the possibility of increasing the self-coverage rate for the 24-hour substance abuse treatment service is limited by the large proportion of purchased places.

## Quality and patient safety

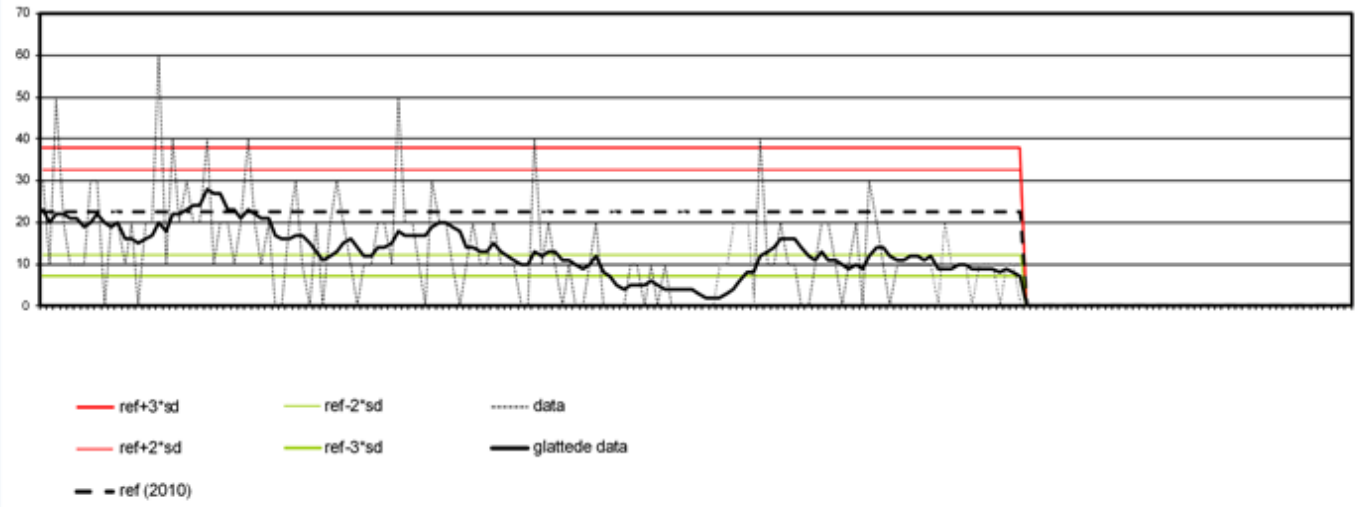
The work with quality and patient safety is a high priority. Patients must be able to trust that the services at Akershus University Hospital are safe and of good quality.

Managers at all levels are responsible for carrying out systematic improvement work. The work is based on the use of national recommendations, knowledge-based methodology and practice for improvement work. Statistics and individual stories from reports of adverse events, complaints, supervisory cases and compensation cases are a source for finding areas of risk, and thus also provide opportunities for learning. Results from quality and patient safety measurements are published on the health authority's website. Health, environment and safety (HSE) for the employees is also important. Good HSE can promote quality and patient safety by ensuring safe working conditions.

Efforts are being made to prevent hospital infections. This work has produced good results over several years. An important measure to increase patient safety was the introduction of the Self-coverage 2016 tool for risk assessment (early warning score) in adult somatics in 2015. This is used to ensure early and correct intervention in the event of deterioration in the patient's condition. At the children's and youth clinic, the PedSafe tool is used, which has been developed by the professional community there. This has been so successful that it has been adopted in the children's wards at all the country's hospitals.

The national patient safety program "In safe hands 24-7" aims to reduce the proportion of patient injuries by 25 per cent by the end of 2018, as well as to improve the patient safety culture in the health service. Published every year

**Figur 2-9 Andel pasientopphold med minst én pasientskade 2011-2018**




a national overview of the frequency of patient injuries measured by the Global trigger tool (GTT) method. The proportion of patient stays with patient injury has decreased from 2011 (figure 2-9).

During 2015, a total of 28 so-called "package courses for cancer" were introduced, which make it possible to monitor course times systematically. They are useful management tools for both the health organization and the health authorities.

The package processes must ensure the patients standardised, well-organised and predictable treatment processes without unnecessary non-medically justified delays in assessment, diagnostics, treatment and rehabilitation. Course coordinators plan the course accordingly national guidelines, sets up appointments and is the hospital's contact person for patients and GPs. Interdisciplinary meetings had already been introduced for many of the subject areas, and the need for these meetings has been further strengthened. X-ray time windows have been established for all package processes. Efforts are also being made to reduce the time it takes to transfer patients from Akershus University Hospital to regional services at Oslo University Hospital, among other things through interdisciplinary video meetings with Oslo University Hospital for some processes in order to reduce the process time.

Feedback from the patients has been positive. A great many patients with a well-founded suspicion of cancer are quickly disproved. Patients diagnosed with cancer receive more predictable and faster treatment.

**Table 2-2 Proportion of patients treated within the standard processing time for package processing cancer in the period March 2017-April 2018**

| | Mar | April | May | June | July | Aug | Sept | Increased | Nov | Dec | January | Feb | Mar | April |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Everyone progress | 76 % | 68 % | 54 % | 56 % | 59 % | 41 % | 73 % | 58 % | 62 % | 60 % | 52 % | 75 % | 63 % | 54 % |
| Breast cancer | 76 % | 80 % | 45 % | 32 % | 47 % | 34 % | 55 % | 33 % | 48 % | 32 % | 25 % | 47 % | 33 % | 26 % |
| Thick- and rectal cancer | 76 % | 82 % | 72 % | 68 % | 65 % | 57 % | 87 % | 59 % | 61 % | 65 % | 56 % | 80 % | 64 % | 75 % |
| Lung cancer | 81 % | 71 % | 60 % | 67 % | 70 % | 68 % | 68 % | 72 % | 81 % | 80 % | 85 % | 92 % | 75 % | 71 % |
| Prostate cancer | 71 % | 38 % | 60 % | 43 % | 70 % | 24 % | 56 % | 61 % | 57 % | 57 % | 44 % | 63 % | 52 % | 33 % |
| **Goal** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** | **70 %** |

## 2.4 DIVISION OF TASKS AND COORDINATION

**The number of patients with complex conditions is increasing, partly as a result of the wave of elderly people.**

Many patients with mental disorders and substance abuse problems have somatic conditions - and vice versa. The patients need complex follow-up, which makes it necessary for collaboration between specialist departments, healthcare organizations and the municipalities.

**Within own healthcare company**

Over the past decades, a rapidly increasing amount of knowledge has created a need for professionals with specific knowledge and procedural skills. In the wake of this, a number of new health professions, medical specialties and branch specialties have emerged.

Broad medical and healthcare knowledge has had to give way to specialist expertise. More and more departments are involved in the examination and treatment of the individual patient.

The current organization of the treatment offer does not meet the need for coordination in a satisfactory manner. There are nevertheless good examples of new forms of collaboration emerging:

Thematic organization

At Akershus University Hospital, all somatic activities for children and young people under the age of 18 are gathered in the children's and young people's clinic. This also applies to admissions for surgical diagnoses.

The children's and youth clinic is located in a separate building, where premises and facilities are specially adapted to children and young people. The model maintains an overall perspective, where the department for child rehabilitation and the department for children and young people's mental health have a significant place.

The offer for patients with complaints in relation to the pelvic floor and organs in the pelvis is gathered in a virtual pelvic centre.
The business is based on a coordinated interdisciplinary collaboration between various specialties and professional groups regarding the examination and treatment of the patients.

Multidisciplinary teams

National guidelines for the treatment of cancer require that a multidisciplinary team consisting of doctors from different specialties must work closely together to diagnose and treat cancer. At Akershus University Hospital, there are well-functioning multidisciplinary teams for all major forms of cancer. The teams meet one or more times a week to make decisions about individual patients.

> A central challenge is to give the patient the experience that the treatment is coherent and comprehensive

**With other healthcare institutions**

Many patients have to deal with several hospitals. An increasing degree of surgical specialization has led to more and more elective interventions being centralised.

Radiation treatment for patients from the Akershus hospital area takes place at Oslo University Hospital. Centralization of tasks leads to patient processes going across the hospitals and resulting in fragmented processes.

The health institutions have separate record systems, and much of the communication therefore takes place through referral and exchange of epicrises. This means that the exchanges between the companies do not always work satisfactorily.

A central challenge is to give the patient the experience that the treatment is coherent and comprehensive. Where parts of the patient course must take place at other hospitals, this must be carried out with good planning and in close cooperation with all actors involved.

**With municipalities and GPs**

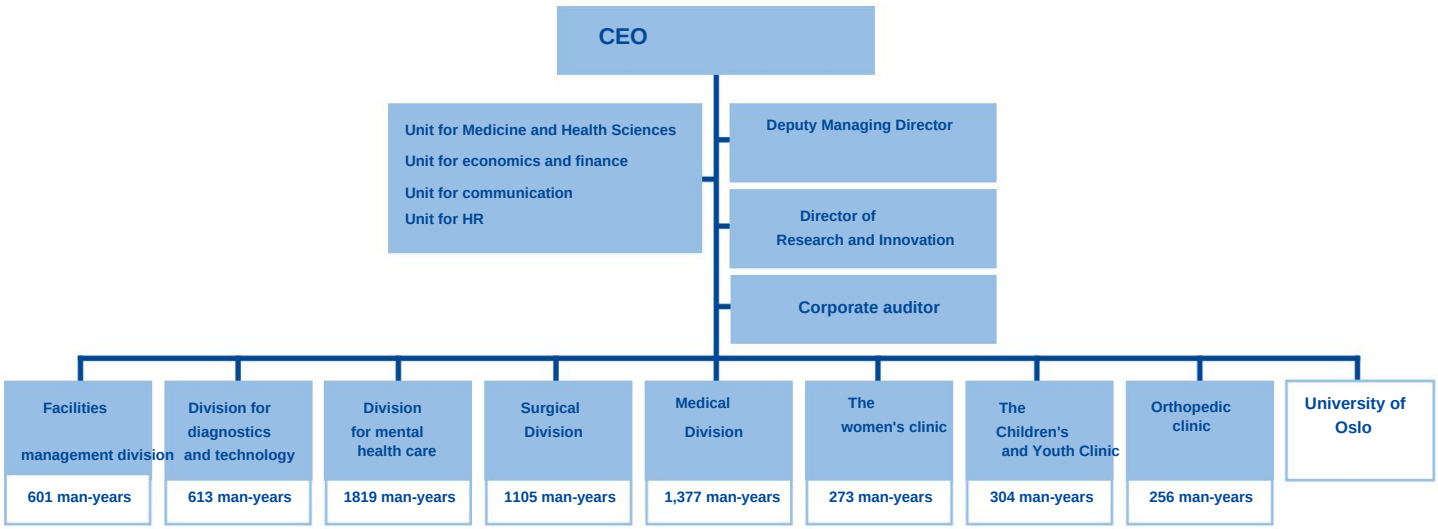
The patient processes also include the primary healthcare service. There is great potential in strengthening and developing interaction across the two levels of care, not least when it comes to arranging treatment at the right level.

The division of tasks between the primary healthcare service and the specialist healthcare service within mental healthcare is outlined in Stortingsmelding 26 (2014-2015) The primary healthcare service of the future - proximity and comprehensiveness.

The interaction between Akershus University Hospital and the municipalities spans a wide range of areas and activities; from collaboration on admission and discharge to prevention and coping; from pregnancy and birth to collaboration on patients in the palliative phase. The interaction takes place between different professionals and professions. It is particularly important to discuss how the transitions between the levels of care can be made in the best possible way. In addition, there is the need for collaboration and competence transfer when establishing new patient services.

## 2.5 ORGANIZATION AND MANAGEMENT

**Akershus University Hospital is owned by Helse Sør-East.**
**The board is the health company's highest body.**




The employee survey in 2018 showed generally good satisfaction with the working situation (table 2-3). The employees reported commitment and good collaboration, and were satisfied with their managers. There was a weaker result for perceived workload and access to necessary resources.

**Table 2-3 Results from the employee survey ForBedring 2018**

| Theme | Number answer | Result this year (score) | Proportion who answered "slightly agree" or "completely agree" |
|---|---|---|---|
| Engagement | 4979 | 80 | 73% |
| Team work climate | 4938 | 82 | 78% |
| Working conditions | 4917 | 49 | 25% |
| Safety climate | 4901 | 78 | 66% |
| Psychosocial work environment | 4815 | 80 | 71% |
| Perceived leadership behaviour | 4842 | 81 | 74% |
| Top managers' role in patient safety work | 3003 | 65 | 49% |
| Physical environment | 4861 | 70 | 47% |
| Follow-up | 4592 | 72 | 70% |

## 2.6 STAFFING AND COMPETENCE

**Staffing is a key factor, among other things, for the provision of services to critically ill patients.**

As a university hospital, Akershus University Hospital has a special responsibility to contribute to the training of health workers who can meet society's future needs

### Staffing

In 2017, Akershus University Hospital had approx. 8,900 employees, divided into approx. 6,700 man-years. Of the permanent employees, 69 percent of the employees worked full-time. The average proportion of women was 77 per cent.

In connection with the National Health and Hospital Plan, a report was prepared on staffing needs in the specialist health service towards 2040 (SSB, 2015). In this, it was concluded that Akershus is the one of the hospital areas that can expect the strongest relative growth in staffing needs towards 2040.

A specialist committee set up by Helse Sør-Öst in 2014 concluded that capacity challenges within intensive care medicine were linked to a lack of intensive care nurses, and that the physical presence of doctors in the units was crucial for optimal utilization of capacity. Emphasis must be placed on high professional quality, continuity in staffing and the presence of doctors with decision-making competence in the departments. The establishment of a new medical specialty in emergency and reception medicine will help to increase competence and reputation for this important specialist area.

## Education

**Education** is a statutory task that includes both basic, further and further education. In collaboration with universities, colleges and upper secondary schools, extensive basic, further and continuing education activities are run by a number of types of health personnel, with an emphasis on practice and practice-based teaching.

**Table 2-3 Educational activities in 2017**

| Professional group | Number |
|---|---|
| Medical students | 670 |
| Other students and students in practice | 1100 |
| Rotation places for doctors and LIS part 1 | 42 |
| Rotation places for physiotherapists | 8 |
| Nurses in educational positions | 33 |
| Doctors in specialization | 462 |

The educational activity must also contribute to ensuring that the healthcare organization has sufficient competence at all times. Although there are currently a sufficient number of health workers being trained in most categories, several studies have concluded that the wave of older people in combination with small cohorts of working age will create a labor shortage. In recent years, deficits in groups such as intensive care and operating room nurses have shown how vulnerable hospital operations are when it comes to a lack of key competence. Access to health personnel with the right skills is going to be a critical factor for Akershus University Hospital in the years to come.

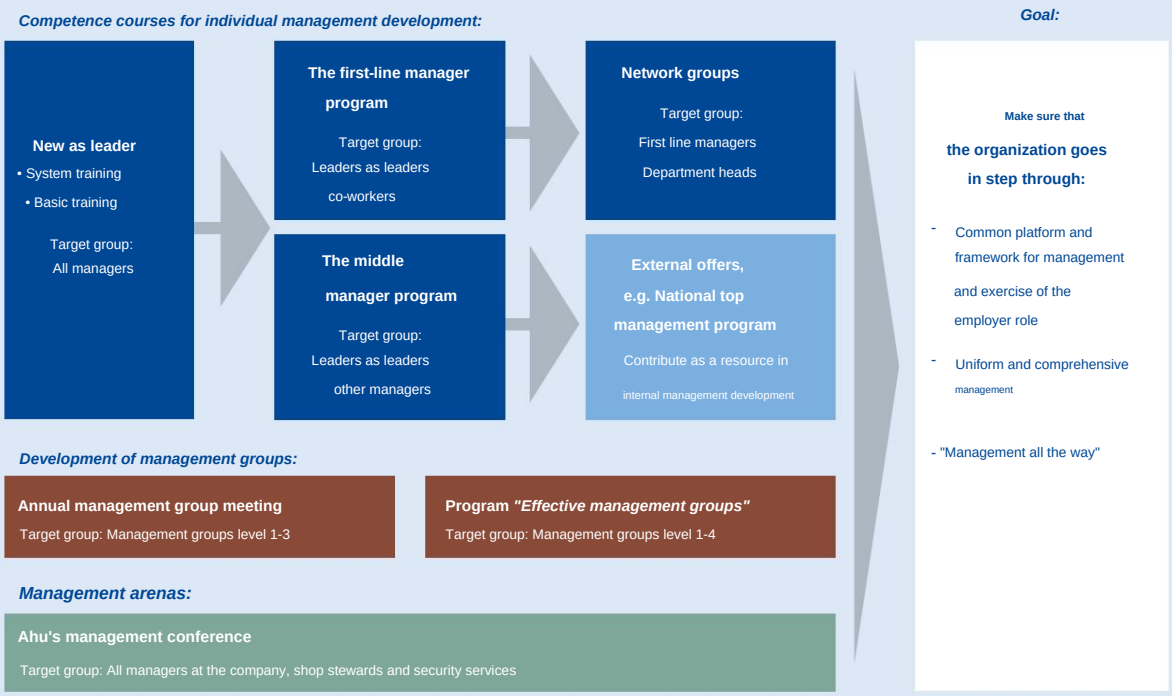
In Stortingsmelding 13 (2011-2012) Education for welfare. Interaction in practice, emphasis was placed on the fact that health personnel must work interprofessionally and with competence to treat patients with complex needs. These are challenges that will increase in the future.

In order to meet the biomedical and technological developments, there will be an increasing need for expertise in several subject areas. There is, in part, considerable competition with the private business world. Good working conditions, professional development opportunities and further education will be crucial to being able to attract and retain the necessary personnel resources.

There is a continuous offer of internal management training (figure 2-11). The work with management training and management development is concretely organized around improvement processes and business management. The management training has a professional profile aimed at the challenges and distinctive features of leading a unit in the health service. The programs have two starting points:

- Individual programmes, where the development and strengthening of the individual manager, and interaction between managers are central.
- Development of management groups and interaction between management groups in the organisation.

**Figure 2-11 Managerial development**



## 2.7 RESEARCH AND INNOVATION

**Akershus University Hospital works purposefully to strengthen research within the entire breadth of the business.**

The business must also be developed through innovation.

### Organization of the research

Formal requirements have been set for university hospitals to make a significant contribution to research-based education in medicine and health sciences.

University hospitals must also be able to document basic biomedical and healthcare research, translational research and clinical research in most clinical subject areas, as well as that research is carried out that maintains a high international quality. Therefore, Akershus University Hospital has worked purposefully to strengthen research within the entire breadth of the business after it received formal status as a university hospital in 2001.

An important initiative has been to create formalized research groups. It is required that all active researchers belong to such a group. Responsibility for the research follows the line structure. The director of research and innovation is part of the hospital's management.

The collaboration between Akershus University Hospital and the Department of Clinical Medicine at the Faculty of Medicine, University of Oslo, is good. The university has a local unit, Campus Ahus, which is divided into three university clinics; clinic for mental healthcare and health service research, clinic for surgical subjects and clinic for internal medicine and laboratory subjects. Close to 100 employees have a main or subsidiary position at one of the university clinics.

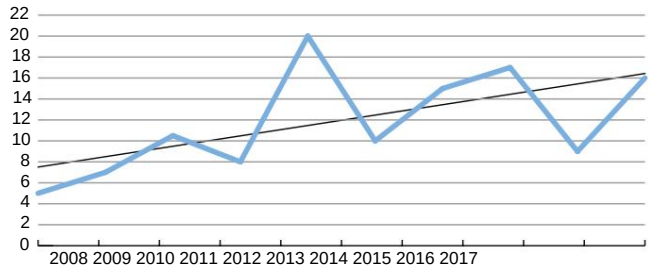
In total, the health organization has 175 research man-years distributed among 450 people. An increasing proportion is financed through time-limited funds exposed to competition from various external sources.

00,000

### Research activity

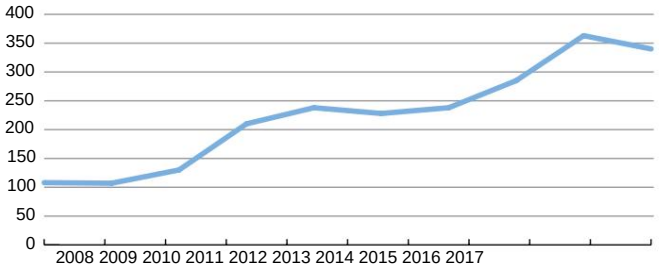
The production of publications and doctorates has been increasing (figure 2-12). In 2017, 16 defenses were held.

**Figure 2ÿ12 Development in the number of doctoral degrees 2008-2017**



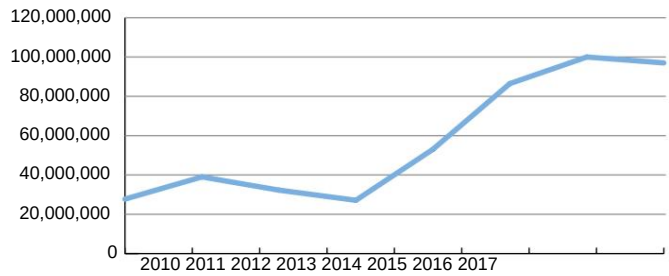

The number of publications in international peer-reviewed journals has been between 220 and 250 in recent years, and in 2015 totaled 285 (figure 2-13).

**Figure 2ÿ13 Development in the number of publications 2011-2017**




The research is increasingly financed by external sources (figure 2-14). This reflects a positive development both for projects, project applications and the merits of the project managers. Recruiting staff with solid research expertise to both clinical and academic positions is a prerequisite for continuing this good development. Important external contributors are Health South-East, the Research Council of Norway, the Cancer Society and the Extrastiftelsen.

**Figure 2-14 Development in allocated research funds from external sources**




The research laboratory Epigen is a joint resource that forms the molecular biological foundation of the healthcare organisation. Further progress in research and development depends on investing in a number of key functions, including on the laboratory side.
The first-line service is involved in some research projects, but there is potential to further develop this. It has been challenging to build up strong research environments where the health sciences are represented.


The number of industrial and self-initiated clinical studies has increased as a result of conscious investment. A coordinator has been employed who will arrange for more clinical studies to be initiated, including early-phase trials. The health authority is a member of the NorCrin collaboration.

The Department for Health Services Research, together with research support for joint functions, has been a significant contributor to bringing forward leading research environments, and coordinates a national network for the subject area.

**Innovation**

In the Health and care 21 report (H021), it is pointed out that there is a large untapped potential for innovation in the health sector. As a large biomedical institution, Akershus University Hospital should promote innovation both through internal prioritization and through internal strategic tendering processes.

Contact with key innovation players will also be important. Research-driven innovation has resulted in a small number of patents and company formations. This work is supported by the commercialization company Inven2, which oversees the commercialization work for all the health enterprises in Helse Sør-East.

## 2.8 ECONOMICS

**Annual profits are a prerequisite for realizing reinvestments in equipment and technical infrastructure.**

In addition, sufficient equity capital must be saved in advance of expansions in terms of area to meet requirements for borrowing for new buildings.

The financial framework conditions mainly consist of allocations from Helse Sør-Ost (fixed income) and variable income as a result of the activity carried out.

The economic situation has shown a significant improvement in recent years. The most important reason has been increased productivity in the somatic part of the business. Active work must still be done to ensure a sustainable economy where the company itself creates the equity necessary for future development.

Expected changes in the admissions area could entail demanding adjustment challenges. Overall, this will require clear prioritization and that operations must be planned and implemented even better. An important element in this work will be to strengthen the common culture of target achievement linked to budget measures.

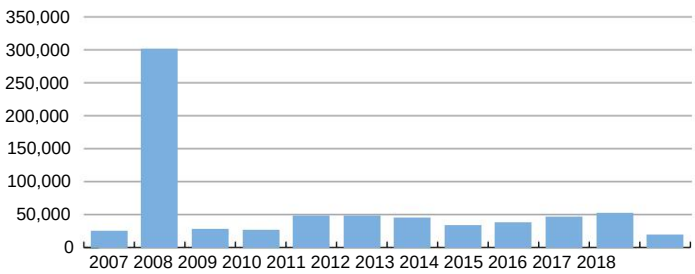
## 2.9 TECHNOLOGY AND EQUIPMENT

**As part of the regional ICT initiative, both infrastructure and solutions will be renewed in the coming years.**

The investment will provide better quality and patient safety, increased efficiency and better interaction between the actors involved in patient care. The hospitals must be able to meet society's expectations for the use of digital interaction arenas, for example the possibility of self-service via helsenorge.no or by self-check-in at the hospital.

In connection with moving into a new hospital in 2008, large investments were made in infrastructure for ICT and medical-technical equipment. However, there is a need for continuous upgrading and replacement of equipment. In order to keep up with medical and technological developments, it is necessary to acquire both new and other equipment.

**Figure 2ÿ15 Acquisition cost per year for medical-technical equipment that is in operation (in NOK 1,000 nominal)**




## 2.10 TODAY'S BUILDING

**Akershus University Hospital has activity in a total of 18 locations within the admission area. The company has its headquarters at Nordbyhagen, in Lørenskog municipality.**

**Condition, capacity and opportunities**

Most of the building stock is owned, but the health care provider also rents a significant area (table 2-4). These are mostly premises that are used in local mental health care and substance abuse treatment.

**Table 2-4 Overview of areas**

| Total area (gross) | Owned areas (gross) | Leased areas (gross) |
|---|---|---|
| 263,000 m2 | 225,000 m2 | 38,000 m2 |

Bed capacity In 2017, the somatic activity at Nordbyhagen had a capacity of 670 beds, including technical beds. Within mental health care and substance abuse treatment, there were 300 beds.

Continuous assessments are made of the number of beds to be staffed. Some beds are kept in readiness for days of particularly high activity. Other beds are taken into use as a result of the development of the offer. The children's and youth clinic has established an advanced home hospital for children with five beds.

Operating capacity
The operative activities at Akershus University Hospital are divided between central surgery and the day surgery center at Nordbyhagen and Ski (table 2-5).

**Table 2-5 Overview of the operational capacity**

| Infrastructure | Central-operation | Day surgery centre | |
|---|---|---|---|
| | Nordbyhagen | Nordbyhagen | Ski |
| Number of operating theatres | 14 | 8 | 4 |
| Number of postoperative sites | 26 | - | - |
| Number of monitoring places | - | 21 | 8 |
| Number of rest/waiting places | - | 20 | 8 |

Due to population growth, there will be a capacity deficit of approximately six operating rooms in 2035. This can be remedied in the short term by increased utilization of the operating rooms, but capacity expansion will be necessary in the long term.

Capacity for emergency treatment and monitoring
At Akershus University Hospital, critically ill patients are cared for in the intensive care unit and post-operative ward, as well as in various monitoring units (table 2-6).

In a report on the intensive care capacity in Helse Sør-Öst (2014), it was assumed that all hospitals must have intermediate beds. At Akershus University Hospital, this is now taken care of by medical supervision, where surgical patients can also be accommodated if necessary. The Children's and Youth Clinic plans to establish a separate child monitoring unit.


**Table 2-6 Monitoring units**

| Area of use | Number of beds |
|---|---|
| Intensive | 10 |
| Medical monitoring | 10 |
| Postoperative | 26 |
| Heart monitoring | 11 |
| Neurological monitoring | 4 |
| Newborn | 23 |
| Intermediate children and youth | 4 |
| Sum | 88 |
| Food | 12 |

Capacity for mental health care and substance abuse treatment
In 2017, mental health care had a total capacity of 300 beds, of which 108 were in locally based services. The offer for children and young people with mental disorders includes 14 acute inpatient places, as well as eight ordinary inpatient places and eight full-day places for young people who need treatment over a longer period of time. Children under 12 who need round-the-clock follow-up are referred to a private institution.

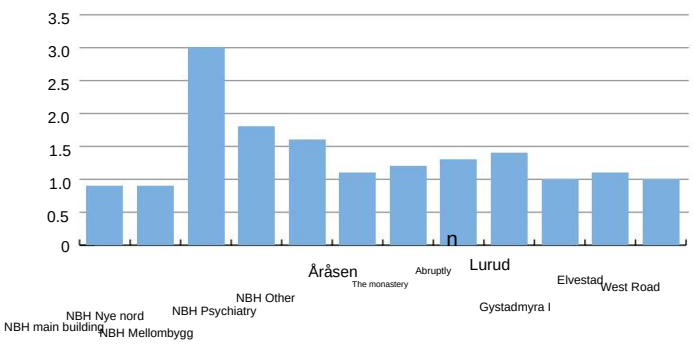
In addition to 68 own beds, places are bought in private institutions for interdisciplinary specialized drug treatment. In order to meet the capacity challenge in this area, the offer has been expanded over the past three years with 29 new 24-hour places, in addition to three detoxification units and four locally based addiction clinics.
This has resulted in an increased level of self-coverage within substance abuse treatment. Nevertheless, there is still a need to use specialized drug treatment services at Innlandet Hospital and private drug treatment institutions that have an operating agreement with Helse Sør-East.

Special psychiatry has a shared solution, where it is partly run under its own auspices at Lurud and partly places are bought from Oslo University Hospital due to a lack of space within its own areas. The external purchase includes 18 in-patient places for security psychiatry and psychosis treatment, as well as for certain other in-patient services. This applies, among other things, to services for patients with eating disorders, young adults with psychosis and mentally disabled people with psychosis. The number of overnight beds purchased is approx. 26.

The geriatric psychiatric activity is located at Skytta with 23 day beds and a large outpatient clinic. The premises are considered to be suitable for this activity. The lease expires in 2021.

**Condition assessment**
The condition of all owned buildings is assessed annually according to NS 3424 as a basis for prioritizing maintenance measures (figure 2-16). Each building is scored on a scale from 1 to 3, where 1 is no deviation, 2 is a minor deviation and 3 is a large/serious deviation.

**Figure 2-16 Condition levels for owned buildings**




NBH: Nordbyhagen, Lørenskog

# 3 Projection

Projections of the need for beds towards 2035 show an increasing need for beds in both somatic and mental health care.

Health South-East RHF is based on a common national model, when the population's future needs for health services are to be calculated. Through this model, Sykehusbygg has projected the need for health services and capacity within 24-hour stays, day stays and outpatient clinics for Akershus University Hospital HF. The needs are assessed based on both mathematical and qualitative approaches:

The mathematical one consists in the current level of activity being projected based on calculations from Statistics Norway for population development and age composition.

In order to capture trends beyond population development, disease development, medical-technological development, expected conversion to day treatment and use of observation beds and patient hotels are assessed, among other things.

The same principles apply to both somatics, mental health care and substance abuse treatment, but there is a relatively large difference in how the change factors in the projections are composed.

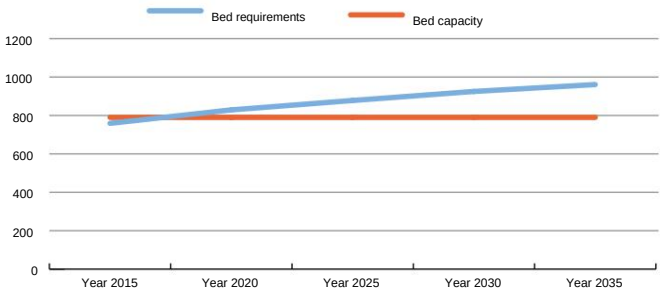
## 3.1 SOMATICS

**In addition to population growth and changing age groups sentence, the following change factors have been taken into account:**

- Epidemiology/medical development (increases the need)
- Interaction with the municipality and home (reduces the need)
- Use of a patient hotel (reduces the need)
- Transfer of 24-hour stay to day stay (reduces the need)
- Transfer of overnight stays (medical) to an outpatient clinic (reduces the need)
- Use of observation device (reduces the need)
- Internal efficiency improvement (fewer days in bed reduces the need)

For daytime activity, the need is also increased by the fact that many patients are transferred from inpatient treatment. For outpatient clinics, a general plus factor of one percent has also been added annually.

**Figure 3-1 Projection of capacity needs for Akershus University Hospital towards 2035**




The projections show that Akershus University Hospital with its current intake area will lack 150-200 beds in 2035.
Overall, there is uncertainty both related to factors that increase the need for health services and factors that reduce the projected need.

In order to solve parts of the undercoverage that the projections show, it is planned to transfer the three Oslo districts that are currently part of the Akershus hospital area to the Oslo hospital area. The times for such a transfer have not been fixed and they have therefore not been included in the projections.


## 3.2 MENTAL HEALTH AND DRUG TREATMENT

**For outpatient treatment, there will be a need for a capacity increase of a total of 4,900 square meters until 2035.**

The projection is based on the same model as for somatics.

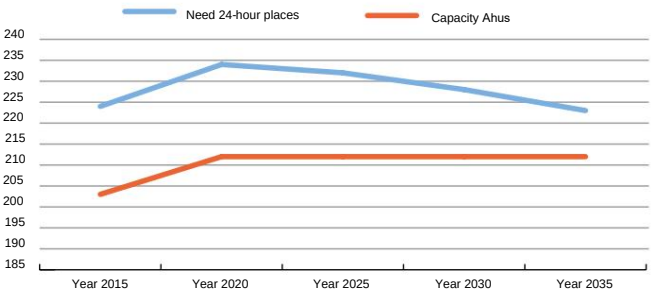
**Table 3-1 Projection of need for consultation rooms for outpatient clinics**

| Activity | Area requirement year | | | |
|---|---|---|---|---|
| | 2020 | 2025 | 2030 | 2035 |
| Adult psychiatry | 1184 sq m | 2192 sq m | 3226 sq m | 4183 sq m |
| Child and adolescent psychiatry | 830 sq m | 1569 sq m | 2136 sq m | 2195 sq m |
| Interdisciplinary specialized drug treatment | 201 sq m | 376 sq m | 538 sq m | 684 sq m |

### 24-hour capacity

The need for beds will decrease as a result of the change from 24-hour to outpatient and outpatient services. As the capacity within adult psychiatry is currently too low, there will still be a need to increase the number of beds (figure 3-2).

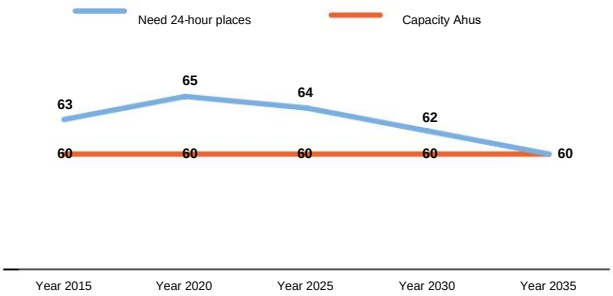
**Figure 3ÿ2 Projection of capacity needs within adult psychiatry**




The 24-hour capacity for children and young people is good, and there will be no need for expansion within the planning period.

For interdisciplinary specialized drug treatment, there is a need for two to five beds in addition to the current capacity. Towards the end of the period, however, the need will gradually decrease and reach the current capacity in 2035 (figure 3-3).

**Figure 3-3 Projection of capacity needs for 24 hours within interdisciplinary specialized drug treatment**



# 4 Analysis and path selection

The main challenges towards 2035 will be related to population growth in combination with an increasing proportion of elderly residents.

There will be a need to expand capacity to meet the population's needs for specialist health services, and to direct efforts towards particular challenges.

## 4.1 STATUS AND CHALLENGE PICTURE

**Akershus University Hospital is undergoing a positive development.**

After an operationally and financially demanding period in the wake of the expansion of the admission area in 2011, the capacity challenges have now been significantly reduced, and the economy is improving. At the same time, the health institution is strengthening itself as a research and teaching hospital.

Development of patient services will be central going forward, and emphasis should be placed on diseases that affect large patient groups. In particular, it will be necessary to strengthen the provision for elderly patients with complex conditions, and for a rapidly increasing number of cancer patients. Increased self-coverage through strengthening of specialized activities will strengthen the patient offer and will also be beneficial for professional development, recruitment, reputation, operations and finances.

Akershus University Hospital needs land measures to be able to meet these challenges. It concerns
- areas for business that takes place in premises with very poor condition and/or temporary approval from the supervisory authorities;
- necessary capacity expansion;
- areas for new services that are no longer to or can take place at Oslo University Hospital (for example, psychosis and radiotherapy);
- areas to bring together dispersed activities for reasons of both subject matter and operational efficiency.

## 4.2 ROAD CHOICE

**The choice of professional focus areas and the structure of the business indicate the direction for the further development of Akershus University Hospital.**

The need to create good, holistic patient processes and strong professional environments is the basis for the design of building-related measures.

**Academic focus areas**
There are four areas that stand out as particularly challenging up until 2035:

Elderly medicine
There is a need to adapt the offer to the increasing proportion of elderly people in the population. There will be more and more patients with age-related diseases such as dementia, geriatric psychiatry, cardiovascular disease, kidney failure and cancer.

Many of these will have chronic and complex conditions that require collaboration between several specialties and professional groups. The activity must be arranged so that the offer to the elderly patients is coordinated as best as possible. This will involve closer collaboration regarding subjects, equipment and patient areas.

> There is a need to adapt the offer to the growing share elderly in the population

Because these patients often need close follow-up even after discharge, it will be particularly necessary to have good routines and systems for interaction with the municipalities.
Some elderly patients will need to switch between municipal health services and specialist health services.

A project has been initiated that looks at several of these challenges. In the autumn of 2018, orthogeriatrics will be piloted as a new offer. This means that patients admitted to hospital with hip fractures or other orthopedic diseases must be followed up by a team of specialists in orthopedics and geriatric medicine. Work is also being done on research related to the establishment of a dementia-friendly hospital. Furthermore, the possibility of establishing a multidisciplinary outpatient clinic for the elderly, as well as solutions for follow-up of patients at home, is being investigated.

## Cancer diagnosis and treatment

Cancer patients are another group that will require a lot of attention in the coming years. An increase of almost 50 per cent in the incidence of cancer and new forms of cancer treatment will require that investigation and treatment are at a high professional level, in line with national action programmes.

The rapid development within the field creates a need for a special focus on cancer, which will involve an escalation to better and more precise diagnostics, a more comprehensive treatment offer, as well as strengthening specialist expertise and research.

A particular challenge is linked to radiation therapy. In the capital area, today only Oslo University Hospital can offer this, which creates challenging transitions between hospitals and great pressure on radiation capacity. Helse Sør-Est has decided that a larger part of radiation treatment will be decentralised, and has put Akershus University Hospital as number two on the list of healthcare institutions that will be given the opportunity to establish radiation services in the coming years. Realization of such a measure will be of great importance both for patient processes and the professional development of the cancer service.

An escalation plan has been drawn up for the cancer area, where an important objective is to create comprehensive patient services and good coordination of the various functions linked to diagnostics and treatment. Furthermore, a project has been started which follows up on the objectives in the ramp-up plan, as well as planning for new buildings.

## The critically ill patient

As Norway's largest acute care hospital, it is crucial for Akershus University Hospital that the offer to the critically ill patients works well and maintains a high professional quality.

A central challenge is to achieve sufficient flow in the emergency department and rapid clarification of the patients' condition, so that they can proceed to the necessary additional examinations and treatment. The interaction between the emergency department, medical monitoring and intensive care is particularly important to ensure that the sickest patients receive the follow-up they need. The sufficient capacity and good coordination of patient processes must be ensured.

> The interaction between emergency department, medical monitoring and intensive care is particularly important to ensure that the sickest patients receive the follow-up they nee

Akershus University Hospital does not have intensive care for children between 3 months and 3 years old. Most sick children come to the children's clinic, while the sickest are received in the emergency department. From autumn 2018, a monitoring unit will be established for children and young people up to the age of 18. Further work must also be done on the boundary between the children's and youth clinic and the intensive care unit at Akershus University Hospital and the children's intensive care unit at Oslo University Hospital.

Akershus University Hospital accepts more acute stroke patients than any other hospital in the country. A solid professional environment offers a complete treatment chain for stroke patients and the country's largest stroke unit with 25 ordinary beds, four monitoring beds, and a subacute rehabilitation unit with 18 beds.
Health South-East has decided that Akershus University Hospital can start thrombectomy. This enables a complete offer for stroke patients, with "one door in" to all relevant offers.

### Mental healthcare and substance abuse treatment

The National Health and Hospital Plan 2016-19 points to the importance of strengthening mental health care and substance abuse treatment. Within these specialist areas, patients are particularly vulnerable. It is therefore very important that good, individually tailored offers are provided, and that they are followed up with good municipal offers.

Coordination of local and hospital-based services will be particularly important for some patients with long-term illness or changing needs. Arrangements must be made for individual experiences to be used in the treatment, and for the patient to be invited to take responsibility for their own recovery through joint choice.

Based on experiences from somatics, there are great expectations for the introduction of package procedures in mental health care and interdisciplinary specialized drug treatment. Structured work is being done to prepare the introduction, including through the establishment of procedures, gathering experience from the cancer package processes and close cooperation with municipalities and districts.

The Department of Children and Young People's Mental Health has established a separate progression structure, which is in line with the upcoming package progression. This involves modules with regular, manager-led assessment of patient progress. The offers for children and young people must be particularly well adapted to the situation of the individual, so that coherent follow-up is ensured across levels of treatment and in the transition between child and adult.

### Structure for the business

The work on capacity and capacity utilization has shown that well-planned stays result in the most efficient patient progression.

There is a growing need for collaboration across occupational groups, subjects and specialties, so that patients receive the most holistic follow-up possible. This is positive for both patients and professional environments. A key question will be how the good processes are created, and who must work closely together to realize them.

### Thematic organization of patient services

Both medical and patient-perceived quality are closely linked to good patient outcomes. By planning well, seeing the individual patient and following how the condition is, it will be safer to be a patient. An important move will be to orient the activity about the patient.

Arrangements must be made for collaboration between healthcare personnel across specialities, occupational groups and treatment levels, so that good and effective treatment processes are created. This can be done by establishing thematic centres, where professionals and functions come together to discuss patient processes. Primarily, it will be about a way of working, and will not necessarily entail a change in organisation. Frameworks and forms of cooperation will be investigated in more detail for each relevant treatment area.

For the patient, there will be fewer service providers to turn to. It should be the staff, and not the patient, who has to move to provide health care. This will provide better patient safety, interdisciplinary resource utilization and competence development. In the coming period, Akershus University Hospital will aim to develop center models for the professional focus areas of mental healthcare, geriatric medicine and cancer. The experience gained from these processes will be useful for the further development of the business.

### Strengthening of specialized functions

Akershus University Hospital has an imbalance between acute and elective functions, which results in fragmented courses for many patients. An increase in activities within specialised, planned activities will be beneficial for treatment quality and university functions as well as for recruitment and reputation. It will thus be possible to establish good patient processes and build up specialist functions in several areas. More advanced, elective activities will also have positive economic and operational effects.

In the coming period, Akershus University Hospital will aim to develop center models for them

the professional areas of focus are mental healthcare, geriatric medicine and cancer

### Integration of research and clinic

New knowledge must benefit patients from an early stage. Implementation of new specialist knowledge and methodology in the clinical business is an important task.
Patients should also, to the greatest extent possible, be offered the opportunity to participate in clinical trials to gain access to new medicines and treatment methods.

By being in continuous development, you can reduce the distance between research and practical patient treatment. It will be particularly important to strengthen the offer linked to diseases that affect many patients, and where specialist expertise is at a particularly high level.
In this way, subjects and research can be promoted in central treatment areas.

### Assessments related to building measures

Academic priorities, as well as the need for beds and office space, are key factors in the preparation of proposals for building-related measures.

### Establishment of radiotherapy

Helse Sør-East has decided that a radiation unit will be established at Akershus University Hospital (board case 030-16). A need for three to four radiation bunkers with two to three high-voltage linear accelerators (linacers) is assumed.

Due to the strict requirements for shielding high-voltage radiation machines, it will not be possible to realize a radiation center without a new building with specially built radiation bunkers. There is suitable and pre-regulated plot area at Nordbyhagen for this purpose. The hospital has a solid oncology environment with the expertise to establish the new and highly specialized patient service.

In addition to the radiation bunkers, it would be expedient to plan a building that also includes bed and outpatient clinic areas. This will make it possible to realize a full-fledged cancer centre. With physical proximity to the main building, it may also be relevant to use areas in the new building to expand other somatic capacity and diagnostics; including imaging diagnostics. Such a solution can provide increased flexibility through joint use of, for example, operating theaters and monitoring stations.

> Akershus University Hospital can contribute to the total solution for the metropolitan area towards 2035

### Building for mental health care

In order to maintain professional quality, safety and operational efficiency, it will be necessary to design a new building for hospital-based mental health care. A new building at Nordbyhagen will enable the collection of all hospital functions within mental health care for adults, which will be central to the further development of both treatment services and the professional environment.

The possibility of purchasing security psychiatry capacity from Oslo University Hospital is limited in time, and the activity must therefore be moved in a few years to premises that Akershus University Hospital itself disposes of or builds.
Oslo University Hospital is scheduled to move its specialist psychiatric activity into new buildings in 2022. A solution should therefore be in place before this time.

The locally-based provision within mental health care and substance abuse in Follo is spread over several localities in Ski. A collection of the functions will be able to provide a more appropriate operation, and at the same time give the opportunity to terminate several leases where the rent will rise to market price within five to seven years. The health authority owns a larger plot of land in Vestveien in Ski where there is space for a joint building for the relevant functions.

### Sufficient area for somatic treatment

Population growth in the admission area is so strong that Akershus University Hospital will have a deficit of beds within a few years. Strengthening the special functions will also create a need for greater 24-hour capacity.

It is a clear objective that the company must have the capacity to take care of the local and regional hospital needs of patients from its own reception area. There will therefore be a need for an expansion of the number of somatic beds at Nordbyhagen, in addition to the areas at Kongsvinger Hospital having to be utilized as well as possible.

Operational improvements and conversion of inpatient treatment to day and outpatient services will be able to free up a number of beds, but at the same time require some area expansion for day treatment and polyclinic. Reallocation of hospital areas that are not currently used for patient treatment will similarly increase the bed capacity somewhat, while there will be a need to find new solutions for offices, staff rooms and other functions.

Even with maximum utilization of the current area, it will be difficult to meet both population growth and an increased self-coverage rate without new bed areas. The number of beds must be adapted to the needs as a result of changes in the admission area, but account must also be taken of the capacity challenge in the capital area as a whole.

### Appropriate office premises

Offices and meeting rooms can be found in several locations; both in permanent and temporary buildings. Some of these are in poor condition. For some of the buildings, there is only a temporary use permit, and they have long since reached their expected lifespan.

Mushrooms and pests have been detected in the "Ole Pooh" and "Consulate" barracks. In addition, the buildings are designed so that the use of space is not very efficient. There is therefore a need for new buildings for office functions. With new premises, it will be possible to plan for an efficient and modern office solution with a sufficient number of places. At the same time, it will be possible to free up areas for patient treatment; either through the reuse of plot area after the demolition of temporary buildings, or by reallocating rooms in permanent buildings. For example, demolishing the "Consulate" will free up a plot of land that could be suitable for the construction of a radiation building.

### Circumstances that affect capacity requirements and the dimensioning of buildings

Kongsvinger Hospital and the associated admissions area will be transferred from Sykehuset Innlandet to Akershus University Hospital in 2019. This entails both challenges and opportunities related to capacity.

It is important to have sufficient space to take care of area functions within somatics, mental health care and substance abuse treatment, and at the same time make the best possible use of existing areas.

It has also been decided that the districts of Alna, Grorud and Stovner in Oslo will be transferred from Akershus to the Oslo hospital area, but it has not been decided when this will be carried out. The time perspective for the phasing out of the districts will be of great importance for the future capacity needs and the economy, as well as what expansions should be planned to meet increasing needs as a result of population growth. A gradual phasing out of functions may be appropriate to avoid capacity being built up at Akershus University Hospital which then has to be taken down again when the districts are transferred to Oslo.

### Contribute to solving the capacity challenge in the capital area

Changes in admission areas and division of tasks between the hospital areas in the capital area are not in themselves sufficient to meet the capacity needs created by the strong population growth.

Structural measures are required. At Nordbyhagen, there is vacant land that has been regulated for hospital buildings.
The hospital building from 2008 also has some unused residual capacity for a number of non-medical support functions.
This would reduce the overall costs in connection with new construction.

Akershus University Hospital can contribute to the total solution for the metropolitan area towards 2035. Capacity expansion at Nordbyhagen will be able to reduce the need for temporary solutions at other hospitals pending the new local hospital at Aker. At the same time, it will help to solve the overall challenges in the longer term linked to population growth in the capital area.

## 4.3 RISK AND OPPORTUNITY ANALYSIS

**The company's financial situation is improving, but the economy is still the most important limiting factor in being able to carry out the planned measures.**

A weak economy will increase the risk of measures being pushed forward, so that the professional gains can only be realized in many years. It is necessary that the area development is carried out in a carefully prioritized order adapted to the company's financial room for action. It may be appropriate to divide construction processes into several stages, even if this is not optimal from a professional point of view.

The changes in the size of the admission area must be accompanied by operational adjustments to ensure that the health institution at all times has a capacity level that corresponds to the population and financial framework. In order to be able to offer the population good patient care, it is important to plan the transfers in a good way.

### Assessment of the feasibility of the plan elements

| Choice | What does it require? | Assessment of implementation ability |
|---|---|---|
| **Academic investment areas** | Competence, cross-functional collaboration, professional prioritization | Can be implemented within today's economy frames |
| **Structural approach** | Planning patient progress, cross-functional collaboration, meeting places, coordination of areas for patient treatment | Can be implemented within today's economy frames |
| **Establish beamÿ treatment** | New build on Nordbyhagen Replacement building for office space | Requires financial surplus for equity |
| **Collect hospital-based mental health care** | New build on Nordbyhagen | Requires financial surplus for equity |
| **Ensure sufficient bed capacity** | Bed capacity in beam buildings | Requires financial surplus for equity |
| **Contribute to solving capacity challenges in the capital area** | Capacity expansion for beds, surgery and diagnostic imaging in radiation buildings | Requires financial surplus to equity |

## 4.4 SELECTION CRITERIA

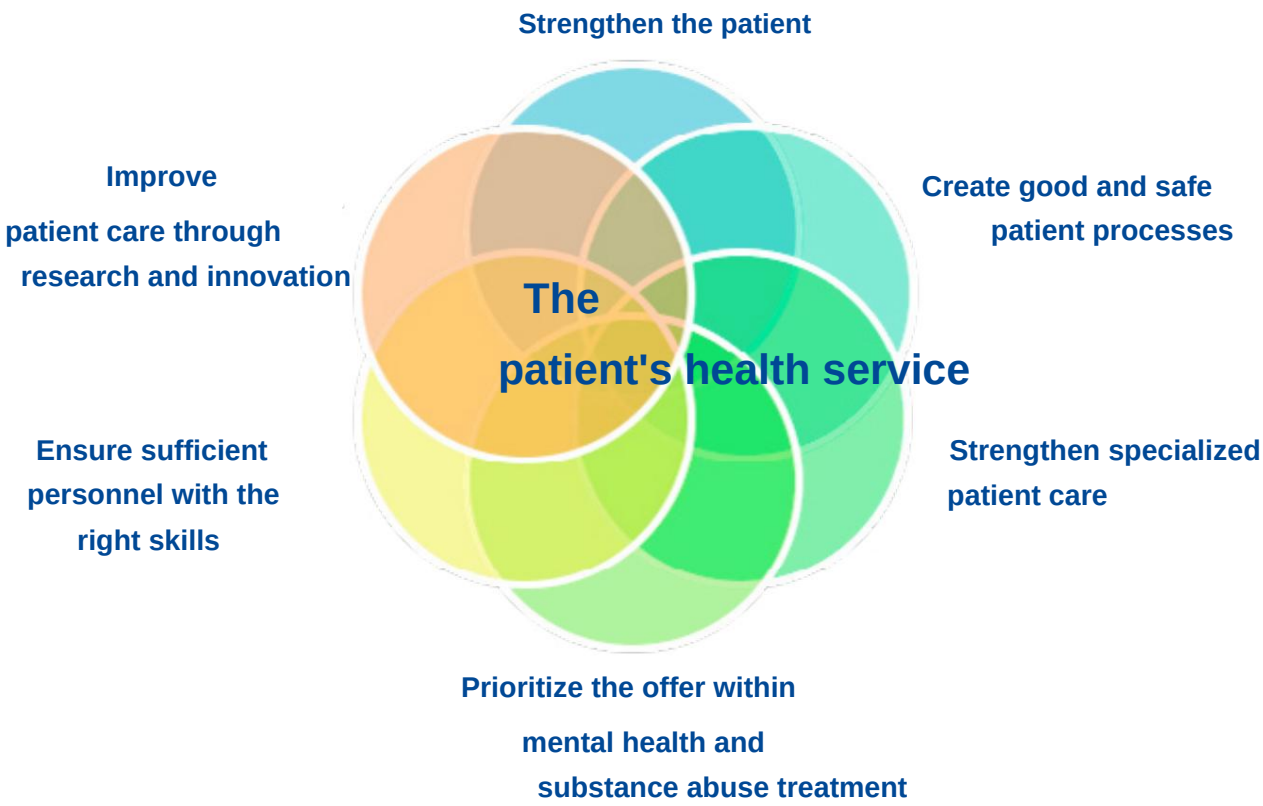
**Choices made for the development of Akershus University Hospital must contribute to the best overall solution within Health South-East in terms of capacity utilization and division of tasks.**

Further development of subjects and economics must be emphasised. The work will support the vision "humanly close - professionally strong". This means that the patient's best interests must be the basis, and that the healthcare company must be far ahead in the development of subjects, research and technology.

The development of the areas must be the result of choices related to the development of the business. Operational improvements and streamlining within the existing area is a continuous process that will continue throughout the planning period. More cost-intensive measures must be prioritized on the basis of subjects and finances.

# 5 Goals

Akershus University Hospital will meet the challenges until 2035 with the help of six main strategic goals.




**Ensure financial sustainability**

### I STRENGTHEN THE PATIENT

The development of Akershus University Hospital will be based on the patients' needs. In the patient's healthcare service, the patient and healthcare personnel are equal partners.

It is important that patients have a real opportunity to influence decisions related to their own investigation and treatment. The users' knowledge and experiences also provide an important basis for the further development of patient services.

### II CREATE GOOD AND SAFE PATIENT PROCESSES

Good patient courses of high professional quality, which are adapted to the needs of the population, must be offered.

Systematic improvement work must ensure safe and high-quality health care for patients. The health authority must work closely with other parts of the health service to ensure that patients receive good follow-up when transferring to other health services.

### III STRENGTHEN SPECIALIZED TREATMENT

Offers for diagnostics and treatment must be gathered around the patient, and the course of treatment must be experienced as a coherent whole.

There are to be established thematic centers for cancer and geriatric medicine, and good cooperation regarding critically ill patients. The area's functions are to be strengthened and expanded through the facilitation of existing services and the establishment of new specialized functions. Professional communities must be early adopters of new knowledge in both medicine and technology.

### IV PRIORITIZING THE OFFER WITHIN MENTAL HEALTH AND DRUG TREATMENT

The aim of mental health services and interdisciplinary specialized drug treatment is to promote independence, self-reliance and the ability to manage one's own life.

Locally-based services must be the cornerstone of mental health care for adults, in child and youth psychiatry and in multidisciplinary specialized drug treatment. The growth within mental health and substance abuse treatment will take place within day care and outpatient clinics. Furthermore, the establishment of a comprehensive offer for hospital-based mental health care should provide good patient outcomes and create a highly competent and attractive professional environment.

### V ENSURE SUFFICIENT PERSONNEL RIGHT COMPETENCE

Akershus University Hospital will contribute to the training of health workers who can meet society's future needs, while at the same time ensuring that its own operations have enough personnel with the right skills. Emphasis must be placed on recruiting, training and retaining personnel.

### WE IMPROVE PATIENT TREATMENT THROUGH RESEARCH AND INNOVATION

Patient care, research, education and innovation are mutually enhancing quality and must be closely integrated. The research must be close to the clinic and particularly oriented towards large patient processes. Research and innovation will be carried out within the entire breadth of the business, while strategic investment will be made in selected areas.

FOTO: FOTOLIA.COM

> Active work must be done on patient education and communication between healthcare personnel and patients

# 6 Sub-goals

## 6.1 STRENGTHENING THE PATIENT

**The development of Akershus University Hospital will be based on the patients' needs.**

It is important that patients have a real opportunity to influence decisions related to their own investigation and treatment.

### Inform

Patients must receive good and adapted information, so that they can participate actively in their own treatment process. In particular, it will be important to ensure that patients with language challenges receive help to understand and to be understood themselves in conversation with healthcare personnel.

Active work must be done on patient education and communication between healthcare personnel and patients. Information letters to patients must be uniform, comprehensible and cover the patient's need for information. In order to ensure a good decision-making process, there must be good information about treatment alternatives.

Arrangements must be made for the use of telemedicine solutions in communication with patients at home, for use in consultations where personal attendance is not necessary. Such a development requires the establishment of a secure and practical communication solution.

### Involve

The users must be consulted for advice, and suggestions from the users must be included in the work to improve patient safety, quality and user experience at Akershus University Hospital.

Not least, the users must have increased influence on their own treatment processes through active participation and discussion with the therapists. Several user-tailored treatment services will be established, particularly for children and young people, to provide the best possible patient experience.

Akershus University Hospital will further develop the collaboration with the users. Patients and relatives are an important driving force for renewal and improvement. User participation is also desirable in research, among other things to arrive at clinically relevant research questions.

The user committee is a central player, and it is important that users are included in large and small processes. Akershus University Hospital also has good experience in involving young users, which will continue. Regular user surveys must also be carried out for use in the improvement work.

**Help to cope** Future patients will need guidance and various forms of coping measures. Medical developments will give more and more people the opportunity to live with or experience recovery from serious illness.

It will therefore be necessary to further develop the current learning and mastery offer and establish new ones. Among other things, it may be relevant to collaborate with the Cancer Society to establish a care center for peer work and other coping measures, with particular attention directed at cancer patients with a non-Western background. Furthermore, there is a need to further develop the patient school for serious diagnoses, to ensure that all larger patient groups receive sufficient information and training to be able to cope with their own everyday life.

## 6.2 CREATE GOOD AND SAFE PATIENT PROCESSES

**The hospital must offer good patient processes that are adapted to the needs of the population.**

Systematic improvement work must ensure safe and good health care for patients.

### Adaptation to the patient's needs

Good and correct patient care is the most important task for Akershus University Hospital. Planning and collaboration across units and specialist areas must ensure a good course for each individual patient.

Patients should experience receiving good and coherent treatment, and avoid unnecessary waiting time. Bottlenecks must be reduced by properly dimensioning the offer and good routines for communication and logistics.

Offers must be made that are adapted to the special needs of different patient groups. The offer for children and young people is to be strengthened through further development of the children's and youth clinic as a full-fledged children's centre, and investment in outpatient clinics, outpatient services and children's rehabilitation. Furthermore, the aim is to establish a regional competence center in youth medicine.

> Safe treatment is a fundamental prerequisite for all business development

### Culture for quality and patient safety

Safe treatment is a fundamental prerequisite for all business development. Emphasis must be placed on using medical and healthcare knowledge and new technological solutions that make investigation, monitoring and treatment safer.

All units must carry out systematic improvement work. Quality targets for patient care must be drawn up, which will form the basis for follow-up of patients during examination, treatment and care. Increased attention to infectious diseases, drug resistance and infection control will also be crucial for good patient safety.

Systematic health, environment and safety work must be an integral part of the quality work. It has been shown that this will increase patient safety, while at the same time preventing injuries and illness among employees.

### Collaboration on the patient across hospitals and levels of care

Good interaction with the other levels of treatment in the health service provides a better patient offer. It is a goal that patients who can receive at least as good treatment without admission to hospital should receive this in the municipality. It will be important to further develop and strengthen established interaction forums, as well as to facilitate mutual exchange of knowledge.
Due to earlier discharges than before, Akershus University Hospital must guide and share its expertise with the municipalities. The primary health service has valuable knowledge of local conditions.

Particular emphasis must be placed on developing more predictable patient processes for patients with a large and long-term need for services in the specialist health service and the municipal health service. Furthermore, measures must be implemented to give all patients a safer transition from hospital to municipal services. The use of welfare technology and new ways of working together will be central.

Good interaction must also ensure continuity in the flow of information when switching between hospitals. The patients must feel that they are followed up in a good way, even if the treatment takes place in several places.

It is necessary to establish good ICT solutions for interaction. This will simplify communication with and about individual patients, and ensure that relevant information is available when a new body takes over treatment responsibility for the patient. The solutions will be able to provide better coherence in patient processes, while at the same time there is a transfer of expertise between the different levels of the health service. New electronic solutions will also be able to contribute to patients being examined at a lower level of care than before because communication and transfer of expertise will be easier.

### Strengthen habilitation and rehabilitation

Modern understanding of effective health services shows that there is a connection between emergency treatment and rehabilitation. Good emergency treatment is characterized by a focus on function and rehabilitation from day one.

Rehabilitation must therefore be an integral part of the patient's course. The specialist health service must provide services within rehabilitation where there is a need for specialist expertise or specialisation, the condition is complex, and there is a need for intensive treatment.

For people in need of rehabilitation, good cooperation between different actors is a necessary premise for success in the individual's rehabilitation course. Separate cooperation agreements have therefore been established with the municipalities on coordinated services, where rehabilitation is central. There is also a good collaboration with Sunnaas hospital. Furthermore, Akershus University Hospital actively uses the private institutional places for patients with rehabilitation needs. These institutions are represented in the ReHabilitation Network at the company. This cooperation must be strengthened and further developed.

The habilitation offer must be provided in close collaboration with the GP and municipal service providers. Patients and relatives must receive the necessary follow-up throughout childhood, adolescence and adulthood. Particular focus areas are the provision for children and young people with acquired brain damage, autism spectrum disorders and the need for early intensive habilitation, as well as adults with behavioral difficulties due to developmental disabilities.

## 6.3 STRENGTH OF SPECIALIZED TREATMENT

**Offers on diagnostics and treatment must be gathered around the patient.**

Specialized offers are to be strengthened and expanded. The hospital must be early adopters of new knowledge in both medicine and technology.

**Strengthen elective area functions**

Expected activity level and competence needs must be used actively in the planning of future patient services.
Patients must be offered specialized treatment that can maintain and further develop existing services.

Good, comprehensive and efficient patient services should make it more attractive to choose Akershus University Hospital. The hospital will also work to establish new treatment options, so that fewer patients have to travel to other hospitals to receive treatment.

An increased degree of self-coverage within specialized treatment services will have a positive impact on competence building, reputation and recruitment, while at the same time strengthening the university's functions and reducing the challenges associated with seasonal variation in the level of activity. Strengthening the area functions at Akershus University Hospital will relieve Oslo University Hospital, which wants to reduce the scope of its operations. More advanced, elective activities will also have positive economic and operational effects.

**Use new knowledge and technology**

Akershus University Hospital must provide good health care.
Patients should feel cared for by competent health personnel who have appropriate tools for diagnostics, treatment and communication.

New knowledge, technology and methodology must be used and evaluated. This will be of crucial importance in being able to provide the best possible treatment options to the patients.

Diagnostic services are an increasingly important part of medical development, and the offer must therefore be strengthened both academically and technically. This will contribute to better diagnostics of diseases that are central to patient treatment, including through reference functions and competence centres.
Medical-technical equipment that provides a better treatment offer for important patient groups must be put into use.

Modernization of ICT and clinical solutions for the healthcare institutions in Health South-East will contribute to strengthening patient safety and quality in patient treatment. Akershus University Hospital must contribute actively to the regional processes and facilitate good implementation locally.

> Collaboration across the units will be of great importance to provide the right treatment and ensure a good patient experience

**Good progress for critically ill patients**

Akershus University Hospital has a special responsibility for developing good courses for the critically ill patients.

The reception of the patients is crucial for the further treatment.
The clarification of important patient groups must be effective, so that the patient can quickly receive adapted and necessary follow-up. Collaboration across the units will be of great importance to provide the right treatment and ensure a good patient experience. Based on experience from established center structures, it can be assessed whether the collaboration related to critically ill patients should be formalized in a thematic centre.

**Center for Geriatric Medicine**

Elderly patients often have chronic and complex disorders.
Arrangements must therefore be made for a course of treatment adapted to the individual.

Such a development requires a greater degree of cooperation between the treatment units internally, in addition to increased interaction with other health and care services. A binding and structured collaboration must be established between professional environments that treat many elderly patients. Close collaboration with municipalities and districts will also be decisive for the development of new ways of working and the introduction of new technology.

Adaptation of treatment options, fewer complications, better treatment results, shorter length of stay and fewer readmissions are important goals. Coordination of expertise and interdisciplinary services will help to make the services better and more efficient, and facilitate integrated research, development and innovation. A meeting place will be established for multidisciplinary and interdisciplinary research within geriatric medicine, where both preventing, treating and living with disease will be important topics.

**Cancer Center**

Through a gradual development and strengthening of the treatment offer for cancer, a thematic center will be established which brings together the offer for adult cancer patients.

The center model will make it possible to offer good courses to cancer patients and better facilitate the coordination of patient courses and work in multidisciplinary teams. This will be of great importance for strengthening professional competence in the cancer area, while at the same time it will make the health enterprise more attractive as a workplace for skilled professionals.

PHOTO: AHUS

Cancer diagnostics will be strengthened through increased capacity, establishment of new methodology, as well as upgrading and acquisition of equipment.

Health South-East has decided that a unit for radiotherapy will be established at Akershus University Hospital. By co-locating a thematic cancer center with the radiation unit, several functions can be gathered in one place. When it comes to cancer treatment for children, it is considered more important to keep the age-related offer together, rather than to coordinate offers for children and adults. Cancer treatment for children will therefore continue to be carried out in the children's and youth clinic.

Research and competence development in the area of cancer must be an integral part of the business. A larger patient base will provide good opportunities for establishing robust biobanks, which can contribute to strengthening the already active cancer research environment.

> By co-locating a thematic cancer center with the radiation unit, several functions can be gathered in one place

## 6.4 PRIORITIZING THE OFFER WITHIN MENTAL HEALTH AND DRUG TREATMENT

**The aim of mental health services and interdisciplinary specialist drug treatment is to promote independence, independence and the ability to manage one's own life.**

Locally-based services are a cornerstone of mental health care.
At the same time, a comprehensive offer for hospital-based mental healthcare must provide good patient outcomes and a highly competent professional environment.

### Further develop local-based offers

People with psychological challenges and drug addiction must receive a good treatment offer as close as possible to where they live.

The work to create good patient and treatment processes and equal offers is continued through the establishment of several arena-flexible, ambulatory, outpatient and other day services. It may also be relevant to strengthen the division of labor between the four DPSs in the company to ensure patients a highly competent offer at the lowest possible level of care.

### Good coordination of services for patients with complex needs

Patients with complex needs must receive combined offers.

This particularly applies to patients who have a combination of mental illness and drug-related problems.

Together with the municipalities, efforts will be made to coordinate the offers across the treatment levels. The possibilities for closer cooperation between mental health care and somatics will also be investigated. For example, the development of satellite centers can provide good patient services at the interface between somatics and psychiatry.

**Better offers for children and young people**

Children and young people will receive better follow-up through individually tailored treatment courses and extensive collaboration with child protection and the school health service.

It is also important to achieve smooth transitions for young patients who still need mental health services after they have turned 18. A structured collaboration must therefore be established between mental health services for children and young people and the department for substance abuse and addiction.

Eventually, it will be relevant to consider changes or expansion of parts of the institutional provision for young people, especially for young people with eating disorders and young people with early onset of psychosis or other serious mental disorders, possibly in combination with drug abuse. Long-term institutional provision for young people should not be the first choice, but only used where necessary. Short stays in combination with intensive outpatient and ambulatory follow-up will be the dominant working model also for young people with more serious problems. Cooperation with the municipal child welfare services and the state institutional child welfare services is an important part of the total offer for both children and young people.

**Collect hospital-based mental health care**

A clearer structure is planned where all hospital functions are gathered at Nordbyhagen, while the local provision is provided at DPS. Bringing together hospital functions for mental health care at Nordbyhagen will create a better distribution of work between hospital psychiatry and the DPS.

There are professional, operational and safety reasons for consolidating the hospital part of the offer for mental health care at one location. An important principle is to have coercion-based treatment centrally located. The establishment of a center for mental healthcare will ensure good treatment processes, strengthen the patient base for research, reduce the number of on-call teams and create a stronger professional environment.

It will also provide the opportunity to place the most resource-demanding patients in need of specially arranged services in a suitable building with good security. Furthermore, it will make the conditions better for collaboration with other professional environments at Nordbyhagen (figure 6-1). For example, it will be very relevant to further develop the multidisciplinary collaboration within geriatric medicine. Offers in geriatric psychiatry will partly be coordinated with a center for geriatric medicine.

**Strengthen the emergency provision for mental health care**

The acutely ill patients will receive better follow-up. Part of this work will involve implementing new guidelines for psychosis treatment and patient flow in the acute treatment chain for mental healthcare. A model for a holistic and coherent treatment chain within emergency psychiatry is being established.

**Figure 6-1 Collection of hospital-based mental health care and addiction treatment at Nordbyhagen**

## 6.5 ENSURE SUFFICIENT PERSONNEL WITH THE RIGHT COMPETENCE

**Akershus University Hospital will contribute to the training of health workers who can meet society's future needs.**

At the same time, it must ensure its own business personnel with the right skills. Emphasis must be placed on recruiting, training and retaining the necessary personnel.

### Contribute to the education of future healthcare personnel

In order to develop the health service of the future in the best possible way, Akershus University Hospital must be a good learning and practice arena for external pupils, students and apprentices.

New technological platforms for learning and guidance, as well as new forms of work are to be used. Emphasis will be placed on digital forms of learning and simulation training. The health authority must work closely with the educational institutions to ensure completeness and coherence in the educations, and help ensure that the educational institutions' study plans are at all times in line with developments in patient care.

#### Competence development in accordance with the healthcare institution's needs

The employees' competence must be developed in accordance with the needs within the various professional areas and professional groups. Long-term, comprehensive and systematic planning must be the basis.

Competence development must be part of an overall effort to recruit, look after, develop and retain personnel. The traditional professional competence will have a central place in the future as well. Good professional environments provide good patient care.

High subject-specific competence lays the foundation for innovation and the development of new methodology. There must therefore be a clear and strong connection between education, research and innovation. Furthermore, the establishment of solid interdisciplinary expertise will be stimulated to meet the need for new working methods and disease understanding.

Leadership development must be emphasized at all levels. A good leadership culture must be created that supports the health company's goals and social mission. Good organization and management must ensure follow-up and development of the human resources.

## 6.6 IMPROVE PATIENT TREATMENT THROUGH RESEARCH AND INNOVATION

**Patient care, research, education and innovation must be closely integrated and contribute to mutual quality improvement.**

Research will be carried out within the entire breadth of the hospital's specialist areas and within selected strategically central areas.

### Increase research activity

Research activity must be increased both qualitatively and quantitatively.

External funding must form the foundation of the research. Emphasis will be placed on good research collaboration with the University of Oslo and other collaboration partners nationally and internationally.

Infrastructure for research is to be reviewed and strengthened, including by simplifying the work of including patients in clinical studies. The university's and the health institution's research infrastructure must be shared to a greater extent than previously. Establishing arenas for collaboration across subjects, specialties and departments must also be prioritized.

Arrangements must be made for the collection of material from clinical activities in biobanks, as well as the use of IT applications for broad data acquisition and studies of clinical databases. This can provide increased insight into disease etiology and manifestations. Strategic equipment investments should be planned so that next-generation technology can be utilized as best as possible.

Efforts will be made to stimulate more of the employees to gain research competence. In order to strengthen clinical research activity, research and innovation activity must be emphasized to a greater extent when recruiting for clinical positions. It is also a goal to establish more combined positions within the health professions.

### Further develop the strongest research environments

Akershus University Hospital must have research activity at a high international level that supports the development of prioritized medical and healthcare investment areas.

Special support will be given to some outstanding research groups. Akershus University Hospital will be active in life science. Continuation and strengthening of biomedical research and translational research will be central.

### Research for the benefit of patients

In order to increase knowledge about diseases that affect many patients, priority must be given to research along large patient histories.

The research must be an integrated part of the business, so that the researchers get a sufficiently large supply of comparable data, and the patients can benefit from the results through better treatment, care and care. Arrangements must be made to include more patients in clinical studies, and new knowledge must be used in clinical operations from an early stage.

It will be important to build robust professional environments where researchers with different professional backgrounds can meet and create good projects. This is particularly valuable for clinical research, where, for example, nursing and medical approaches can complement each other.

### Promote innovation

In order to provide good and efficient health care, it is crucial to keep up with technological developments.

Facilitation must be made for innovation through strengthened infrastructure and internal strategic financing. Innovation in the healthcare system must also contribute to new businesses. Special attention will therefore be paid to innovation with commercial potential.

Emphasis must be placed on research-driven innovation and collaboration on the development of better tools for diagnostics and treatment. Furthermore, service innovation must be included as a natural part of the development and improvement work. The health authority will also collaborate with external actors on testing new innovative tools with the potential for significant benefit in the clinic.

> It makes good sense to have employees who provide high-quality services, work efficiently and collaborate well with their colleagues

## 6.7 FINANCIAL SUSTAINABILITY

**Economic sustainability is the foundation for all activity and further development.**

With annual profits, Akershus University Hospital will have a solid financial basis to realize the objectives in the development plan, and to maintain and further develop existing buildings and equipment. Investment capacity can be increased through performance improvements in ongoing operations.

### Financial understanding and motivation at all management levels

The culture of thinking about finances as an integral part of the business must be further developed at all levels. Managers must, to a greater extent than before, emphasize follow-up and performance assurance.

A model will be developed that measures the company's costs per patient (KPP), which can show trends over time and variation between individual patients receiving the same treatment. Using this model as a management tool could contribute to an increased understanding of the connection between medical treatment and economic effects. This can provide a greater degree of accuracy when choosing improvement measures.

## Continuous and systematic cost improvement

There is a need for increased attention and knowledge of financial management throughout the organisation. The solutions chosen must be good, without being unnecessarily expensive.

The employees must be loyal to concluded agreements and established systems. In addition, it will be necessary to prioritize harder than before in order to achieve the necessary profit.

## Recruit, look after and retain personnel

It makes good sense to have employees who provide high-quality services, work efficiently and collaborate well with their colleagues.

The work to recruit personnel with the right skills, create a good and developing working environment, and retain valuable labor is therefore central. It will be important to ensure close follow-up of the employees.

Good cooperation with the security service and shop stewards will be crucial to ensure utilization of the overall expertise in the business and create good and safe working environments where employees feel seen, valued and thrive.

## Increase productivity

Efficient operation is the key to increased productivity.

The capacity of the future will depend on how the health institution's overall expertise is used and developed. It is necessary to have good planning of patient processes, collaboration across departments and an emphasis on continuous improvement.

Targeted work must be done to avoid unnecessary or inefficient work processes, for example through the establishment of standardized methodology. Arrangements must also be made for a good distribution of responsibilities and tasks between healthcare personnel groups, based on professional criteria and the need for competence. In addition, it may be relevant to use larger parts of the day to make better use of treatment rooms and operating theatres.

Continuous work to improve hospital stays and reduce the number of admissions should ensure good capacity, while at the same time avoiding unnecessary waiting time during the hospital stay. The work on capacity and capacity utilization shall be continued and strengthened through a capacity program that encompasses the entire business.

Efforts will also be made to expand operational capacity. This will be central to ensuring good and efficient patient processes and for the professional development of the surgical environments.

The conversion of treatment services from 24-hour to day and outpatient clinics must continue in line with national guidelines. Patients who do not need a 24-hour stay shall, to the greatest extent possible, be offered an appointment. In order to reduce the risk of deadlines being missed, the capacity of day and outpatient services must be expanded if necessary.

# ANDSO.

# 7 Plan for development of the building stock

## 7.1 USE OF EXISTING AREAS

**Existing areas must be used optimally. The activity must be planned and adapted to changes in treatment patterns and needs.**

If necessary, rotations and remodeling must be carried out to facilitate good patient outcomes.
The operation must also be as cost-effective as possible by maintaining a high degree of utilization of the hospital buildings.

Systematic mapping of the degree of use and frequency of use will be a natural part of ongoing land management, and create a good basis for planning larger and smaller rotations. Furthermore, the building stock must be developed in a way that provides flexibility. The capacity requirement depends on several factors; among other things available area and equipment, number of treatment rooms, specialist expertise, actual length of stay and good internal patient progress.

### The main building, Nordbyhagen

The somatic activity mainly takes place in the main building, which was completed in 2008. A high degree of utilization of the building stock has been planned, and changes are mainly linked to replacements.

The placement of functions in the building must support collaboration across subjects and specialities, and create the right conditions for the use of new technology. The solutions must ensure that patient-oriented activity has the necessary proximity to medical joint and service functions. This is essential to ensure good patient safety and appropriate logistics. Efficiency and quality of the treatment must be ensured through systematic planning and cooperation between the beds, and by increased utilization of outpatient clinics, operating theaters and other special rooms.

Converting 24-hour treatment to day and outpatient services will free up a number of beds, but at the same time require some area expansion for day treatment and outpatient clinics. Reallocation of hospital areas that are not currently used for patient treatment will similarly increase the bed capacity somewhat, while there will be a need to find new solutions for offices, staff rooms and other functions.

### Nye nord, Nordbyhagen

Despite the name, this is the oldest of the hospital buildings at Nordbyhagen. It was commissioned in 1978 and extended in 2001.

After moving into the new hospital building in 2008, Nye nord was converted into a patient hotel and office space. For reasons of capacity, some of the area has again been used for clinical activities. Patient activity in Nye nord takes place on floors U1 to 02.

In its current form, there are restrictions on which clinical functions can be in Nye nord. From fire and ventilation technical considerations, it is not considered appropriate to re-establish bed areas from the third floor upwards. However, the areas may be suitable for an outpatient clinic.

## 7.2 RENTED AREAS

**Use of rented premises is part of the assessment when planning future buildings.**

Although Akershus University Hospital owns most of the building mass, the hospital also rents several premises.

### Office spaces

Office space that is currently located in temporary buildings at Nordbyhagen must be replaced with a permanent solution.

Depending on the chosen solution for developing the patient services, it may also be necessary to move offices from other buildings. The office building can also accommodate non-specialized functions such as treatment aids.

The areas to be replaced are mainly in temporary buildings where there are no rental costs or significant maintenance costs. However, consolidating the office areas in a modern building will result in significant operational savings.

Areas that are not to accommodate specialized hospital functions are suitable for rent. There are plans for the construction of an office building at Nordbyhagen, which may be relevant to consider.
A solution where Akershus University Hospital gradually takes over ownership of the building will create greater flexibility for future use of the areas.

An important prerequisite for the location is that offices for health personnel must be a short distance from the hospital. This applies in particular to some groups that must be in the immediate vicinity of patient areas. An investigation of needs and possibilities for office space has been initiated.

### 7.3 NEW BUILDING

**In order to develop good professional centers for cancer and mental health care, it is necessary to build new buildings.**

The buildings can also contribute to solving future capacity challenges in the capital area.

**Cancer Center**

The cancer center is a new operational measure that will strengthen the offer for cancer patients qualitatively and quantitatively. It will also help to increase the self-coverage rate for the cancer area.

The board of Helse Sør-Est decided in April 2016 that the establishment of a radiation unit at Akershus University Hospital is prioritized as number two after Telemark Hospital. A new building must be built to realize this. Project framing has been initiated.

As a minimum, the new building must contain radiation bunkers with high-voltage linear accelerators, MR and CT for dose planning, outpatient area, support area and necessary bed capacity.
Depending on the location of the building, there may also be a need to have other functions in the building, including sampling and preparation of cancer drugs.

As part of a full-fledged cancer centre, it will eventually also be necessary to design for a larger bed area, as well as an expansion of operating and imaging capacity.
If the construction of the cancer center is done in stages, the second stage can be built as a wing towards the first building stage.

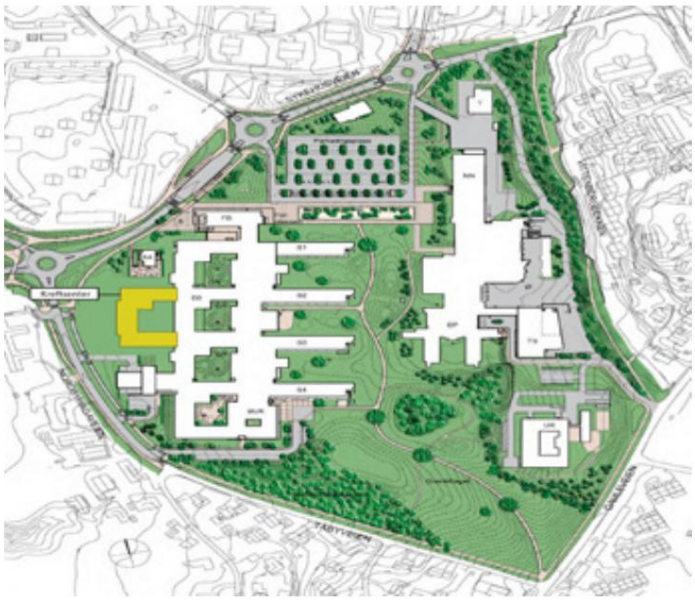
The construction project should be sized so that it will cover the increased capacity needs towards 2035. It may also be relevant to include plans for a capacity expansion that can help meet the capital area's overall needs for beds and treatment space. In this way, the expected increase in activity as a result of population growth can be distributed among several hospitals.

The building can be placed adjacent to the existing treatment building for somatics, as shown in figure 7-1. Such a solution will provide a great degree of flexibility through joint use of areas; for example operating theaters and monitoring stations.

This location also provides the opportunity to connect the building to existing technical infrastructure and logistics solutions.

On the most relevant site today there are offices in funds - early premises (the "Consulate"). Locating the cancer center here will therefore entail a need for alternative space for offices. This can be solved through a new office building. Alternative locations for the cancer center are at the children's and youth clinic or at Nye nord.

**Figure 7ÿ1 Possible location of a new building for a cancer centre**



**Center for hospital-based mental health care**

The Center for hospital-based mental health care will accommodate hospital-based functions that are currently located partly at Nordbyhagen, partly outside the hospital area.

It is necessary to expand capacity in order to be able to move the offer within safety psychiatry and geriatric psychiatry to Nordbyhagen. The concept phase has been completed, and Helse Sør-East decided in June 2018 that planning for the new building should continue in a concept phase.

Construction of new areas for psychosis treatment and security psychiatry will mean that the activity in owned premises at Lurud and the purchase of places at Gaustad may cease. Areas that can accommodate the activity within geriatric psychiatry will in their entirety be able to replace the rented areas at Skytta. In addition, a new building can provide room for adult rehabilitation and neurorehabilitation. This will depend on the chosen solution for other subject areas, for example the location of a center for geriatric medicine.

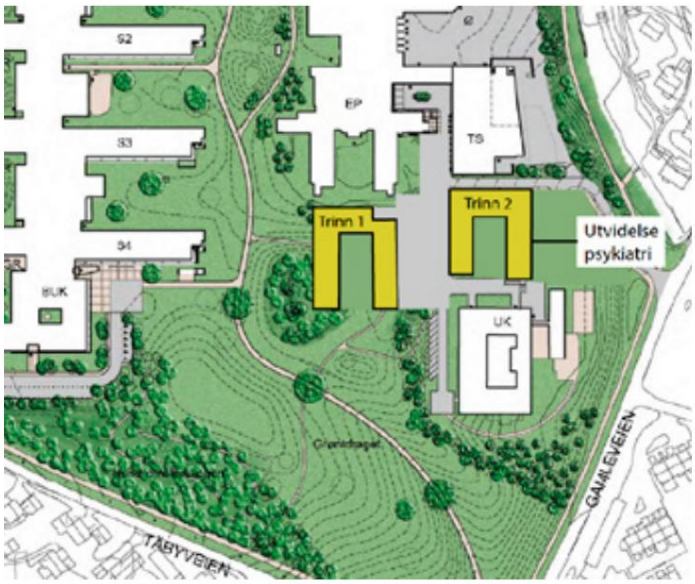
The operational gain from ending the purchase of places at Oslo University Hospital has already been partially taken out through the operational adjustments that have been made in recent years. However, combining the other activities in one operating unit at Nordbyhagen will result in more rational operation. Furthermore, terminating the lease at Skytta could result in an annual expenditure reduction of

> Economic sustainability is one prerequisite for all further development of the enterprise, and annual profits are necessary to be able to implement the area measures in the plan

approximately NOK 10 million. Disposal of property can be credited as equity. In the long term, it may be appropriate to consolidate the offer for children and young people at Nordbyhagen through expansion of the areas in the current youth psychiatric clinic.

New buildings for mental healthcare can be placed adjacent to existing psychiatric buildings, as shown in figure 7-2.

**Figure 7ÿ2 Possible location of new buildings for hospital-based mental health care**




### Co-location of local mental health services in Follo

Akershus University Hospital currently has activities within mental health care and substance abuse treatment at four different locations in Ski, three of which are in leased areas.

In connection with the owned building where Follo DPS is located, the health organization also owns an undeveloped plot of approx. 6,000 sq m. There will be several different models for utilizing this plot of land, and these are being investigated. A collection of all functions in the same place can, for example, be realized in new buildings, possibly in collaboration with external actors. The combination can enable the termination of several leases in Ski for a total value of NOK 10.4 million.

## 7.4 PRIORITIZATION OF MEASURES WHICH CAN BE DONE WITHIN THE HEALTH COMPANY'S FINANCIAL ACTION ROOM

**The professional and capacity-related needs of the clinical business are decisive for which area measures are to be prioritized towards 2035.**

Financial sustainability and annual profits are necessary to be able to carry out the planned building measures.

**Professional and capacity-related needs are decisive for the prioritization of area measures** The phasing in of Kongsvinger hospital and associated admission area from 2019 necessitates the prioritization of capacity within hospital-based mental health care, in order to receive an increased volume of patients.

Furthermore, it is expected that the possibility of purchasing places from Oslo University Hospital for security psychiatry will cease from 2022.

Bringing together hospital-based mental healthcare will provide an organizational gain in the form of more appropriate operations, but also professional gains through a stronger collective professional environment and easier recruitment. In addition, it will be possible to establish a larger security zone around special psychiatric patient areas.

Health South-East has decided to decentralize radiotherapy in the region. Establishing a cancer center with radiotherapy will help to provide a comprehensive offer to patients in the admission area. Such an investment could result in a more coherent patient process and reduced waiting times.

The radiation therapy offer is aimed at a group of patients who have a particular need for good follow-up without delays.
Furthermore, it is of central importance to have a strong and unified cancer professional environment. This will bring benefits both for patient services, research and recruitment. The time for completion of the new building must be coordinated with plans for reducing capacity at Oslo University Hospital.

**The economy lays down guidelines for choosing a solution**
Although the economy is improving, it is still the most important limiting factor for expanding the building stock.

Financial sustainability is a prerequisite for all further development of the enterprise, and annual profits are necessary to be able to carry out the area measures in the plan. In this situation, it is necessary to prioritize. In the coming years, it is necessary to continue to pay close attention to good planning of the operation and the best possible utilization of the modern and good premises at Nordbyhagen. Funds must be set aside for ongoing maintenance and investments in equipment and buildings.

Construction of own buildings requires that the company can provide at least 30 percent equity capital. The funds can be raised through the creation of profits or the sale of property. Ski hospital has already been sold and Moenga was decided to be sold in the summer of 2018. When the security psychiatry is moved into a new building at Nordbyhagen, Lurud can also be considered disposed of.

New psychiatry building at Nordbyhagen can be implemented in several stages, where collection of services in psychosis and security should be prioritized. Areas for geriatric psychiatry and youth psychiatry will be able to be built in the second and third building stages, respectively.

The cancer center can also be realized in several stages, where the radiation unit and necessary area for the establishment of the radiation offer will come first, followed by area for other functions that will contribute to creating the most comprehensive offer possible for cancer patients.

Preliminary calculations show that a new building in Ski municipality to gather locally-based functions for mental health care, child and youth psychiatry and substance abuse treatment in Follo can provide better finances than renewing existing leases. When the current leases expire in 2022 and 2024, the rent will be adjusted up to the market price, which will entail a significant additional cost.
There are several possible solutions for the realization of a new building on the plot owned by Akershus University Hospital in Vestveien.

## 7.5 AREA MEASURES IN THE FIRST HALF OF THE PLAN PERIOD (2018-2023)

**Ensure utilization of existing, good areas throughout the period.**

This will be a natural part of the continuous process of improving operations and capacity utilization.

**Land projects that do not require own investment funds**

| | |
|---|---|
| 2022 Office space | Rent office space to demolish temporary buildings and free up space for patient treatment. |

**Land projects that require investment funds**

1) Cancer center stage 1
The building will contain radiation bunkers, linacs, imaging equipment, planning area, outpatient clinic and beds.

**Schedule:**
2018-19: Project framing.
Then the concept phase, preliminary project and construction period

**Financing:**

| | |
|---|---|
| Borrowing needs | NOK 497,700,000 |
| Realized funds through property sales | NOK 123,750,000 |
| Investment funds (saved through profits) | NOK 89,550,000 |
| **Total cost** | NOK 711,000,000 |

2) Psychiatry building stage 1
The building will contain premises for psychosis and security treatment.

**Schedule:**
2018-19: Concept phase and preliminary project
2020-22: Construction period

**Financing:**

| | |
|---|---|
| Borrowing needs | NOK 403,200,000 |
| Realized funds through property sales | NOK 95,000,000 |
| Investment funds (saved through profits) | NOK 77,800,000 |
| **Total cost** | NOK 576,000,000 |

3) Collection of locally based services for mental health care and substance abuse treatment in Follo
The building will contain space for an outpatient clinic and 24-hour treatment.

**Schedule:**
2020-21: Idea phase, concept phase, preliminary project
2022-24: Construction period

**Financing:**

| | |
|---|---|
| Borrowing needs | NOK 210,000,000 |
| Realized funds through property sales | NOK 60,000,000 |
| Investment funds (saved through profits) | NOK 30,000,000 |
| **Total cost** | NOK 300,000,000 |

## 7.6 AREA MEASURES IN THE SECOND HALF OF THE PLAN PERIOD (2024-2030)

**Ensure utilization of existing, good areas throughout the period.**

This will be a natural part of the continuous process of improving operations and capacity utilization.

**Land projects that do not require own investment funds**
No concrete plans are currently available.

**Land projects that require own investment funds**
1. Psychiatry building – Stage 2 (geriatric psychiatry)
2. Cancer center – Stage 2 (collect more features)
3. Psychiatry building – Level 3 (child and youth psychiatry, inpatient services)

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# Appendix 1 – Mandate for the work

Processed by the health organisation's management team 03/03/2015

**OBJECTIVES OF THE DEVELOPMENT PLAN**

The development plan for Akershus University Hospital HF 2030 shall:

- Provide an overall projection of the need for specialist healthcare services in the admission area
- Incorporating needs as a result of further development of university and area functions, including radiation therapy, a better balance between immediate help and elective activities
- Describe the scope for spatial solutions which can cover estimated needs
- Propose different models for realizing the area-wise solutions, including also a model for step-by-step development in line with the increase in need
- Describe future development opportunities for the health organisation's operations at Ski Hospital and other locations outside Nordbyhagen

# Appendix 2 – Premises from Health South-East RHF for the work with the development plan after the first discussion meeting (

In a letter of 17/06/2015, Helse Sør-East RHF gave the following premises for the work:

"The following assumptions and basic documents must be used as a basis for the health institution's development plan: a) Plan for strategic development in Health South-East.

The planning document was rolled out in 2012, cf. case in the regional health organisation's board 075-2012, and is valid from 1 January 2013.

b) Relevant regional sub-strategies and subject plans

(cf. Annual report 2014 for Health South-East RHF, ch. 5.2.3)

c) Overall framework as well as financial and professional frameworks

priorities given by the regional health authority's board in case 044-2015 Economic long-term plan 2016-2019.

d) Commission and order for Akershus University Hospital HF (for 2015).

e) RHF board case 090-2014 Analysis of activity and capacity needs 2030

Health South-East – basis for further development and planning

f) RHF board case 046-2015 Treatment capacity in Oslo and Akershus

hospital areas - plan for measures and implementation

g) The Directorate of Health's Supervisor for early phase planning of

hospital projects

The progress plan and implementation of the work must comply with the new procedure for processing development plans and construction projects in Health South-East, cf. business meeting in Akershus University Hospital on 17 June 2015, item 6. This means that a business part of the development plan must first be prepared, and that this must then be submitted to Helse Sør-East RHF before work on a building-related development plan is started.

Due to the ongoing work on capacity needs in the Oslo and Akershus hospital areas, cf board case 046-2015, a close dialogue will be set up with the regional project in which Akershus University Hospital HF participates and the development plan project at Akershus University Hospital HF.

This also means that the operational and building-wise development plan for Akershus University Hospital HF cannot be finalized until the board of Health Sør-East RHF has processed a final recommendation related to capacity in Oslo and Akershus hospital areas. It is planned that the final recommendation relating to capacity in the Oslo and Akershus hospital areas will be processed by the board of Health Sør-East RHF in November or December 2015.

When the complete development plan is available, Health South-East RHF will assess any implications as a result of the ongoing work on the National Health and Hospital Plan.

Reference is also made to the health authority's plans for a new psychiatric building at Nordbyhagen. The concept phase has been carried out and the plans submitted to Health Sør-East RHF with a request to proceed to the concept phase. In the long-term financial plan 2016-2019, Health South-East RHF has assessed the project and prioritized the health enterprise group's overall investment plans for the period. No room has been found to prioritize this project in the planning period. It is assumed that Akershus University Hospital HF, in the further work with the development plan, will clarify the possibilities of extending the lease period for existing premises with Oslo University Hospital HF."

# Appendix 3 – Premises from Health South-East RHF for the work with the development plan after the second discussion meeting (D2)

In a letter of 25/05/2016, Helse Sør-East gave RHF guidelines for the further work with the development plan:

Akershus University Hospital shall

- take into account regional clarifications about the recording area and distribution of functions
- coordinate plans to increase self-coverage with capacity needs and relevant interfaces
- describe operational and capacity improvement measures that can be implemented in the short term
- carry out a thorough review of possibilities within existing areas
- prioritize measures that can be implemented within it financial room for action
- clarify the priority of the new psychiatric building at Nordbyhagen must have
- describe a staged development where dependencies between building measures appear
- prepare a financing plan for the alternatives and assess opportunities for self-financing
- consider alternative forms of financing in a complete perspective

A new guide for the development plan work was adopted by the board of Health South-East on 16 June 2016. It is assumed that the work will be adapted to this and guidelines in the national health and hospital plan.

# Appendix 4 – Composition of the steering and project group

**THE STEERING GROUP**

CEO Øystein Mæland (leader),
Akershus University Hospital
Deputy CEO Tone Ikdahl,
Akershus University Hospital

Chief Protection Officer Finn W Halvorsen,
Akershus University Hospital

Representative, doctor in specialization Darijan Ribic,
The Norwegian Medical Association

Trade union representative Elna Knutsen, Trade Union

Chief shop steward Kai Øivind Brænden,
Norwegian Nurses Organization

Leader Jørn Pettersen, User Committee,
Akershus University Hospital (until 29/8-2016)

Inger Ljøstad, User Committee, Akershus University Hospital (from 15/11-2016)

Director Jørn Limi, Unit for Economics and Finance,
Akershus University Hospital
Director Dagfinn Aanonsen, Unit for Communication,
Akershus University Hospital

Subject director Pål Wiik, Unit for Medicine and Health Sciences,
Akershus University Hospital

Director Jan Inge Pettersen, Unit for HR,
Akershus University Hospital

Director Morten Bendiksen, Division Facilities Management,
Akershus University Hospital

Director Janne Pedersen, Division for diagnostics and technology,
Akershus University Hospital

Director Jan Petter Odden, Children's and Youth Clinic,
Akershus University Hospital (until 15/10-2016)

Cst. dir. Johnny Jakobsen, Children's and Youth Clinic, Akershus University Hospital (from 16/10-2016)

Director Ivar Thor Jonsson, Surgical Division, Akershus University Hospital

Director Øystein Kjos, Division for Mental Health Care, Akershus University Hospital

Director Jan HM Røtterud, Orthopedic Clinic, Akershus University Hospital (until 15/11-2015)

Director Inge Skråmm, Orthopedic Clinic,
Akershus University Hospital (from 15/11-2015)

Director Lisbeth Sommervoll, Medical Division, Akershus University Hospital (until 15/05-2016)

Acting Director Anita K Bjørnstad, Medical Division, Akershus University Hospital (from 16/5 to 30/9-2016)

Director Anita Schumacher, Medical Division,
Akershus University Hospital (from 1/10-2016)

Director Hege Lundring, Women's Clinic,
Akershus University Hospital (until 15/05-2016)

Director Pernille Schjønsby, Women's Clinic,
Akershus University Hospital (from 1/8-2016)

Professor Tom Øresland, Head of Campus Akershus University Hospital

Professor Knut Stavem, University of Oslo

Subject director Alice Beathe Andersgaard, Health South-East RHF (until 21/06-2016)
Municipal manager Inger Skarpholt Fjeld, Frogn municipality (from 1/8-2015 to 21/06-2016)

District director Bjørn Haraldsen, District Stovner,
Oslo municipality (until 21/06-2016)

**PROJECT SECRETARIAT**

Deputy CEO Tone Ikdahl (leader)

Clinic manager Tormod Fladby, Department of Neurology,
Medical Division

Head of Department Axel Hauge, Property Department,
Division for Facilities Management

Special adviser Lennart Lomell Jensen, Staff,
Mental health care division

Head of Department Lars Åge Møgster, Analysis Department,
Unit for economics and finance

Assistant Director Kjell Åge Vold, Unit for Economics and Finance

Senior researcher Ånen Ringard, Department for health services research (secretary) (until 1/12-2015)

Senior adviser Ruth Torill Kongtorp, Secretariat (secretary) (from 1/12-2015)

# Appendix 5 – Overview of stakeholders and involvement

At the start of the project, a stakeholder analysis and plan for involvement was drawn up. An overview of the involvement is shown in the table below:

| Interested party: | Stakeholder involvement |
|---|---|
| The board | Board matters and board meetings |
| Hospital management | Management meeting matters and representation in the steering group |
| Trustees | Representation in the steering group, dialogue meetings and presentation in some of the organisations' own forums |
| Protection service | Representation in the steering group, orientation to AMU and the protection service |
| The users | Representation in the steering group, orientation in the user committee and the youth council and participation in brainstorming sessions |
| The line organization | Representation of level 2 managers in the steering group, representation of level 3 managers in the project secretariat, information and input meetings in divisional/ clinic management groups, participation in brainstorming sessions, discussion at management meetings for levels 2 and 3. |
| Research, education, UiO and HiOA | Representation in the steering group by the head of Campus Ahus and another UiO employee, joint research committee, the research leaders' meeting, the education committee, collaboration meetings with the rector's office and the medical faculty. |
| Health South-East | Formal discussion points, orientation of the AD, representation in the steering group under part 1, coordination with the capacity project for the capital area |
| The primary health service | Representation in the steering group during part 1, collaboration forum, ASU, SU director's meeting, meeting with the districts, participation in brainstorming |
| The specialist health service: OUS, Lovisenberg, Diakonhjemmet, Inland, Østfold | Conversations at director level, meeting point in the capacity project for the capital area |
| Private non-profit organizations | Information and discussion meetings, participation in brainstorming sessions |
| Local business | Meetings with local developers, Knowledge City Lillestrøm, Kjeller innovation |
| Ski Hospital Friends | Information meeting, participation in brainstorming |

# Appendix 6 – The building stock at Akershus University Hospita

**NORDBYHAGEN**

The condition of owned premises is generally good. In 2015, 90 per cent of the building stock had a condition rating weaker than 1.2; typically 1.4. A new review of the condition levels for each individual building will take place until Christmas 2018.

Table 1 shows the degree of condition for the buildings at Nordbyhagen as an average for all subjects within construction and engineering. 0 is "very good condition" and 3 is "very poor condition". The main building at Nordbyhagen has an average condition rating of 0.9. The building was planned for high utilization and a great degree of flexibility. This gives the hospital good conditions for optimal operation of most hospital-based functions.

The older buildings at Nordbyhagen have varying degrees of condition. An intermediate building that currently houses the department for illegal drugs has been found to have fungal damage in the supporting structure. This building should therefore be demolished.

**Table 1 Buildings at Nordbyhagen**

| Building | Area (sqm) | Use | Average degree of condition (0-3) |
|---|---|---|---|
| Main building | 119 590 | Somatics | 0.9 |
| New North | 19,023 | Offices/As | 0.9 |
| Intermediate construction | 17,528 | Psychiatry | IR/H.kj.: 0.9<br>Laundry 2.8 |
| Psychiatry building | 9,852<br>(600) | Psychiatry | Main part: 1.8<br>(Intermediate construction: 3.0) |
| Adolescent psychiatry | 2,669 | Psychiatry | 1.4 |
| Adult habilitation | 1,065 | Psychiatry | 1.5 |
| Technical center | 2,921 | DFM | 2.0 |
| The kindergartens | 6 701 | DFM | 1.7 |
| Various | 1,935 | DFM | 1.6 |
| NKS health center | 1540 | Neurorehab. | Leased area |
| Dr. Kobro's Way | 340 | Operating funds | Leased area |
| Dr. Kobro's Way | 600 | Offices | Leased area |
| Various | 1,935 | DFM | Leased area |
| Ole Brum temporarily | 1,437 | Offices | The roof must be replaced within 5 years |
| Base Camp, medium | 1 267 | Somatics | Remodeling carried out |
| Brakker, temporary | 109 | Psychiatry | Leased area |
| Consulate, media. | 4,400 | Offices | Roof, ventilation, facades within 5 years |
| Barrack rig 4, middle | 500 | DFM | Not maintained |

The average building age is 23 years.
Categorized into buildings with heavy infrastructure (somatics), light infrastructure (administration & mental health care) and temporary/ under decommissioning, the average age is 13, 26 and 67 years respectively.

Some activities are run in temporary barracks on the hospital grounds. This primarily concerns office space for which space has not been found in permanent buildings. The operation is based on a dispensation from Lørenskog municipality, which has now expired.
There is therefore a great need to move the activity from the barracks to permanent buildings.

**NEW NORTH**

Nye nord was built for clinical operations in the 70s and expanded in 2001 to prepare the main phase of the Nye Ahus project. After moving into the new hospital building in 2008, Nye nord was rebuilt to house patient hotels, administration and teaching functions. In 2012, the emergency room was moved from Lillestrøm Hospital to the first basement floor in Nye nord. A separate ambulance entrance, examination and treatment rooms, and two X-ray laboratories were built.

In order to remedy the need for capacity that arose after the admission area was expanded in 2011, the patient hotel was rebuilt into full-fledged beds, while the maternity hotel with 20 beds was retained. The bed post on the first floor was operated on a dispensation from the Norwegian Labor Inspection Authority until the summer of 2016, when the rooms were upgraded to group 1. The rooms in the maternity hotel have group 0 status.

**Table 2 Technical condition New North (2016)**

| Technical Functional Area | Character |
|---|---|
| Building | 1 |
| Plumbing – Ventilation/pipes | 2 |
| Electric power | 1.6 |
| Telephone and automation | 2 |
| Other installations | 2 |
| Outdoors | 1 |
| Overall average total score | 1.6 |

**LOCATIONS OUTSIDE NORDBYHAGEN** Locally-based activities take place partly in owned and partly in rented premises in Nedre and Øvre Romerike, in Follo and Oslo. The degree of condition for owned buildings on the outdoor sites has a spread of 1.0-1.7 (table 3), and the buildings have varying degrees of elasticity.

Ski Hospital was sold to Ski Municipality in 2018. Ahus leases back premises that are used for clinical activities.

Some of the rented premises are adjacent to owned land, while others are operated as separate units. The leases for all premises expire during the plan period; several of them in 2022 (table 4).

**Table 3 Owned areas on the outdoor sites**

| Building | Area (sqm) | Use | Average degree of condition (0-3) |
|---|---|---|---|
| **Follo** | | | |
| Follo – Vestv. | 4,500 | DPS per day | 1.0 |
| **Lower Roman Empire** | | | |
| Åråsen - sector building | 2,150 | DPS, BUP, ARA | 1.1 |
| The monastery | 1 159 | ARA | 1.2 |
| The rush | 2,688 | BUP | 1.3 |
| Lurud | 10,461 | Special psych. | 1.4 IR is not used |
| Moenga main building | 2,921 | DPS days | 1.7 under sales |
| **Upper Roman Empire** | | | |
| Gystadmyra I | 3,800 | DPS | 1.0 |
| Elvestad main building | 1,979 | ARA day | 1.1 |
| Elvestad garage | 41 | ARA days | - |

**Table 4 Leased areas at the outdoor locations**

| Building | Area Use | |
|---|---|---|
| **Follo** | | |
| Sports road | 1,327 | BUP, DPS, ARA |
| Åsenveien | 4,800 | DPS, offices |
| Ski hospital | 4565 | Somatics |
| **Lower Roman Empire** | | |
| Åråsen south | 7,879 | DPS, BUP, ARA |
| Health building | 370 | Somatics |
| Sagittarius | 5,356 | geriatric, DPS |
| **Upper Roman Empire** | | |
| Gystadmyra II | 3,223 | DPS, BUP, ARA |
| Jessheim shopping centre | 141 | BUP |
| **Groruddalen** | | |
| Rosenbergveien | 6,396 | DPS, BUP, ARA |
| Jericho road | 4,879 | DPS |
| The pine tree | 1,547 | BUP |

**PLOT AND PROPERTY CONDITIONS**

## Nordbyhagen

The hospital area at Nordbyhagen has a total area of 519.9 daa. It includes building areas of 385.8 daa, traffic area and other areas of 64.9 daa and open areas of 69.2 daa.
The area is used for hospital operations, housing, hospital nurseries and business operations. The area is managed by Akershus University Hospital, Stiftelsen Ahus boligselskap and the Hospital staff cooperative.

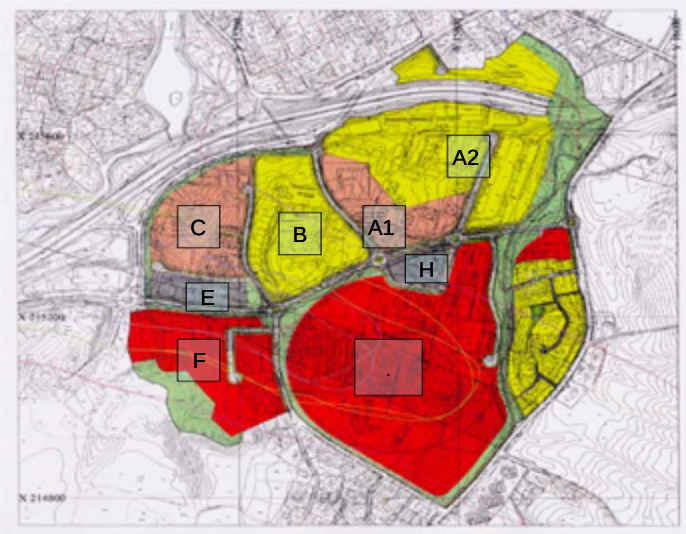


**Figure 1 Regulatory plan for Nordbyhagen. Area for hospitals and other public purposes is marked in red**

## Vestveien 15, Ski municipality

Akershus University Hospital owns a plot of land in Vestveien in Ski municipality of 30 daa. Follo DPS is based in a building on the site. The site is not assumed to be fully utilized. The plot is part of a larger area development, Ski Vest, initiated by Ski municipality and two major private property players. Over 500 homes, an expanded nursery school and a new secondary school will eventually be built in the area.

**Akershus University Hospital**
**HF** Visiting address: Sykehusveien 25,
Lørenskog Postal address: PO Box 1000,
1478 Lørenskog Telephone: 02900 |
Fax: 67 90 21 40 E-mail:
postmottak@ahus.no **www.ahus.no**