

The Swedish Ministry of
Health and Social Affairs'
policy areas within

HEALTH AND WELFARE

– An overall research strategy

An overall research strategy for the Swedish Ministry of Health and Social Affairs' policy areas within health and welfare

Foreword

The Swedish Government has given FAS the task to prepare a proposal for an overall research strategy for the Swedish Ministry of Health and Social Affairs' policy areas within health and welfare. The research covers issues of major importance for all governmental departments and for goals concerning growth, health, safe health care, welfare and social security for all Swedish citizens. The strategy that is presented to the Swedish government is not FAS' strategy in relation to its official instructions; instead it goes significantly beyond what is stated there. The task is to meet the challenges and shifts in value in health, welfare, technology, population development and citizens' expectations in regard to health care, social welfare and working life.

We believe that Sweden and Swedish researchers are prominent internationally in numerous research areas that relate to the Swedish Ministry of Health and Social Affairs' policy areas, not least in light of the long tradition that exists within Swedish health and welfare research and the new conditions in the form of register research that are being developed. The proposal for research strategy presented here provides the prerequisites for maintaining and above all raising the quality, both in basic research and in needs-driven research within health and welfare.

Broad consultations have taken place during the strategy work with representatives of stakeholders within central government, regional government, local government, the private sector as well as users and citizens. Important points of departure have been to observe the balance between the demands and expectations that society can impose on research for the development of individuals and society as a whole, and the researcher's independence and professional responsibility. It is crucial that the research carried out has the highest possible scientific quality in order to be able to benefit individuals and society.

A steering group appointed by FAS in February 2011 (Ewa Stålldal, Chair of the FAS board, Erland Hjelmquist, Secretary-General of FAS, board members Johan Fritzell, Kjell Torén and Eva Nilsson Bågenholm, and Bengt Sandin from the beginning of November 2011) has led the strategy work. The project work has been carried out by Visiting Professor Nina Rehnqvist as the project manager, together with Sofia Norberg and Hanna Sjöberg as project staff.

The project has been carried out with an initial, very comprehensive hearing, and close consultation with a large number of stakeholders within central government, regional government, local government, the private sector as well as users and citizens. They have contributed valuable viewpoints, documentation and proposals during this process. Consultation has also been carried out with representatives of the research councils and public authorities most closely affected by the strategy's goal areas (the Swedish Research Council, the Swedish Research Council Formas, VINNOVA, the Swedish National Institute of Public Health, the Swedish National Board of Health and Welfare, the Swedish Council on Health Technology Assessment, Sweden's local authorities and regions, and the Swedish Social Insurance Agency). These authorities and organisations have also contributed important written documentation to this strategy.

It is our view that this overall research strategy will lead to the promotion of high quality and socially relevant research that will be able to be realised, in both the short and long term, in operations so that goals for the population in respect to good health and quality of life, equality, social security as well as participation and freedom of choice, are attained to a higher degree than previously. A strengthening of and increased focus on the areas that have been highlighted in this strategy, in combination with effective and cross-sector cooperation, is a prerequisite in order for the Swedish Ministry of Health and Social Affairs and the parties which operate within its policy areas to be able to meet the challenges that face us.

The FAS Board passed a unanimous decision on the research strategy proposal at its board meeting on 29 November 2011.

Stockholm, 1 December 2011

Ewa Stålldal
Chair of FAS Board

Erland Hjelmquist
Secretary-General of FAS

Summary

The scope of the Swedish Ministry of Health and Social Affairs' policy areas demands a general research perspective at the level of the population as a whole and at individual level within a number of scientific fields. Continued and sustainable support for research of relevance to these fields is therefore necessary. This can be of a basic research character and include, for example, studies of the life situation of individuals and groups, and studies closely linked to practice. The research linked to practice can be at system, organisation, group or individual level and cover for example interventions, pedagogic contributions, training/initiatives or research into work innovation, but also how new knowledge is implemented and utilised. New issues are identified in both basic research and needs-driven research and these provide new theories and hypotheses, and identify new methodological requirements.

Four challenges have been identified, which are based on the challenges facing society, and which can be viewed as threats against the objectives that have been set for the Swedish Ministry of Health and Social Affairs' areas of responsibility within health and welfare, and which can be transformed into opportunities with, among other things, the assistance of research.

- Changes in the population structure
- Legitimacy in welfare systems, including health care
- New increasing expectations - increased costs
- Inequality - low level of inclusion

The altered population structure will impose demands for new solutions within health care, health, social security and pension systems, working life and not least sustainable financing. The demographic, economic and technological development in synergy with medical developments and political decisions/reforms within the welfare sector have given rise to complex and new issues that make multi-/inter-disciplinary scientific perspectives relevant. For example, the new "survivors", i.e. the really small premature babies and the very elderly and other groups who are given the opportunity to survive have given rise to new inter-disciplinary scientific research requirements. A similarly urgent challenge for research is to analyse the prerequisites for young people to establish themselves in the labour market, but also young adults' willingness to start a family and their prerequisites for providing children with a good childhood. The opportunities for the elderly to continue active participation in working life also require new approaches and flexibility in the organisation and management of working life. Many immigrant groups risk exclusion from the labour market, which can lead to social exclusion and ill-health.

Legitimacy in welfare systems, including health and medical treatment must be met with strategic research-based measures. It goes without saying that activities that are important for society are to be supported by high quality research. The complex political and social connections between changes (regulation and management) in the welfare systems and social/political changes in society constitute an essential task for basic research. At the same

time it is important to increase the benefit of research to society and its citizens. Research about changes in the welfare systems should therefore be developed and strengthened by more studies of interventions and effect research which are of relevance for objectives within the respective activities. Objectives must thus be researchable and require a combination of basic research and needs-driven research. How the executive organisations and public authorities function and are managed are also important research fields. It is important that these can function to a greater degree than at present since knowledge and learning organisations with the capacity to receive and realise knowledge can thereby better contribute to knowledge dissemination. The Swedish Government, regional and local government, which are the welfare systems' principals, ought to impose clearer requirements for this on the service providing organisations - irrespective of nature and form of operation. Important focus areas are also implementation research in order to better understand and identify mechanisms that control how research-based knowledge is utilised. That part of welfare research and health care research that concerns how the service providing organisations function and are managed should also be boosted. The research field includes studies of the organisations' structure, culture, finances, organisation and results.

New increasing expectations and increased costs for society's social security, pension systems and health care services lead to different requirements as to how public services should be organised and implemented. New technology and new information and communication technologies create new opportunities and better access to knowledge, more choice and higher expectations for both citizens and for political decision-makers. The bar is being raised for what is considered to be a good quality of life and this can lead to greater costs for welfare services. Participation in the labour market and productivity and efficiency must therefore be increased in order to be able to guarantee future growth.

A labour market that functions well in the long-term is important for development and growth. Financing of the health care and welfare systems is dependent on an efficient labour market and a working life that does not give rise to injuries and ill-health, and which enables employment for all. Issues relating to the labour market and working life and the Swedish Ministry of Health and Social Affairs' areas of responsibility cut into each other in this way, e.g. in regard to health insurance and parental benefits, and also for people with disabilities to enter working life. Labour market issues are important from this perspective for the research strategy.

Inequality in health and welfare and low level of inclusion still remain significant among different groups. Certain living habits, disabilities, shortcomings in the working environment, unemployment and exclusion are major risks to health. More research is required into preventive measures to reduce inequality and to prevent complex needs arising. This includes highlighting issues concerning for example values, responses and attitudes. The significance of and interaction between different underlying factors, lack of

knowledge and lack of application of available knowledge needs to be highlighted in more detail. This applies for children and young people, the elderly with complex care requirements, those who have difficulty in entering and remaining in working life, persons with mental health problems and other groups that are particularly dependent on the health and welfare systems in their lives. It is also important to throw light on the role that the health and welfare systems play in relation to the definition of poverty.

The methodological advantages that are created by Sweden's unique access to quality-assured data in the various types of registers, biobanks and other databases constitute a Swedish competitive advantage in the international research arena. It is important that this data is made available in a user-friendly and integrity-assured manner for researchers and that resources are allocated for utilising the data.

Sweden has good breadth and quality in its research concerning health and welfare. Increased international cooperation is important for both the common international challenges that are identified and in order to utilise the competencies that exist outside Sweden. The challenges for health and welfare that are of a global nature, e.g. pandemics, resistance to antibiotics and environmental issues, must be researched in international collaboration. In addition to supporting the good research that is already being carried out, a further strengthening of competence is suggested within the following areas:

- Implementation, assessment and effect research
- Health economics research
- Welfare state research
- Research on epidemiology, statistics and informatics
- Register research
- Ethics research
- Insurance medicine research

The research strategy is also based on the research sector taking an interest in both welfare and care and health systems, as well as a user- and everyday life perspective. An important consequence is the need for research on the rights and growing up conditions for children and young people – also from a children's perspective – in a rapidly changing welfare society.

In addition to this, there are several important medical, health and care areas where there will be a lack of competent researchers in light of the rapid generational change in coming years.

The strategy's proposal is intended to provide the prerequisites for maintaining and above all raising the quality level, both in the basic research and in the needs-driven research within health and welfare so that the objectives for the Swedish Ministry of Health and Social Affairs' policy areas within health and welfare can be attained. The strategy proposes the following:

- Raising the quality level through method development and subject specialisation, and increased interdisciplinary scientific cooperation
- Working to ensure that research leads to usable results to a greater degree
- Boosting intervention studies and effect research
- Increasing the use of registers and databases
- Strengthening organisation and services research
- Increasing implementation research
- Imposing the requirement that executive stakeholders function as knowledge and learning organisations
- Coordinating at various levels to facilitate better goal attainment, e.g. between departments, researchers and research funding bodies and users

In principle all research should be published, scrutinised and used internationally in order to achieve high quality and relevance. In the strategy, FAS proposes prioritising international cooperation, particularly within Europe and the Nordic region.

Chapter 1

1.1 Introduction

The task assigned by the Swedish Government to FAS is to draw up an overall research strategy for the Swedish Ministry of Health and Social Affairs' policy areas within the health and welfare fields for the period 2012-2017. According to this mandate, consultation shall take place with relevant research funding bodies and other stakeholders. The strategy shall be presented to the Swedish Government on 1 December 2011 and is expected to be part of the Swedish Ministry of Health and Social Affairs' preparatory work for the 2012 Research and Innovation Bill. The task has therefore been carried out in light of the wording in the government's mandate to six public agencies to draw up a common research strategy (U2011/1435/F; FAS, The Research Council FORMAS, the Swedish Research Council, the Swedish National Space Board, the Swedish Energy Agency). It is stated in the mandate to the six public authorities prior to the 2012 Research Bill that:

- Sweden's position as a research nation shall be boosted
- Research shall contribute to greater sustainable economic growth and welfare
- Research shall be of the highest international class
- Research shall be carried on primarily within the fields that have already have or have the prerequisites to have significance for human welfare, social development and the competitiveness of business and industry

It is particularly important for the public authorities prior to the 2012 Research and Innovation Bill (U2011/1435/F) to: "identify the areas where targeted initiatives can help boost the quality of Swedish research and the ability of Swedish research to contribute to greater competitiveness and growth for Swedish business and industry and to increase the benefits of research for the development of society". These ambitions have relevance for the Swedish Ministry of Health and Social Affairs' policy areas within health and welfare.

1.2 Objectives

The strategy's point of departure has been to promote research that is socially relevant and of high internationally-recognised quality and that can be expected to have an effect in activities that can lead in the short or long-term to objectives in respect to equality, inclusion, security, greater control of one's own life situation, choice and a health care system that shall provide better health.

The Swedish Ministry of Health and Social Affairs' areas of responsibility

The Swedish Ministry of Health and Social Affairs has 16 areas of responsibility, of which 11 more directly concern the health and welfare field. Objectives for these areas have been used as the basis for discussion and analysis to identify the key challenges and to formulate proposals in the research strategy.

Areas of responsibility	Objective for the area
Children's rights	Children and young people shall be respected and be given opportunity for development and security as well as inclusion and influence
Public health	Create social prerequisites for good health on equal terms for the whole population
Disabilities	Create a society without obstacles in order to allow inclusion and equality in living conditions for people with disabilities
Parental benefits and allowances for parents	Help to improve prerequisites for a good economic standard of living and greater choice, and greater control of one's own life situation for all families with children
Health care	Health care shall give the patient added value in the form of better health. Health care shall be carried out as efficiently as possible and with the best possible result for patients so that the general public has a high level of confidence in the system.
Individual and family welfare	Boost ability and opportunity to be included in society for people in financially challenging situations, and increase protection for children at risk.
Pensions	Persons with low or no income-related pension shall be guaranteed an index-linked basic pension benefit.
Health insurance	Absence from work due to ill-health shall be at a long-term stable and low level

Social insurance	Financial security in the event of ill-health and disability, for the elderly and families with children
Social services	Boost ability and opportunity to be included in society for people in financially challenging situations, and increase protection for children at risk
Care for the elderly	Elderly people shall be able to live an active life and have influence in society and over their own everyday situation, be able to age in security and while retaining independence, be met with respect and have good access to care and health services

A research strategy for the eleven areas of responsibility above in relation to the challenges that are identified below imposes by necessity demands on many scientific disciplines and on multi-disciplinary cooperation. This also includes a whole arsenal of scientific methods for use. The strategy also includes a discussion concerning the utilisation and application of research results.

Chapter 2 Challenges

The Swedish Ministry of Health and Social Affairs' objectives, which are presented in chapter 1, are facing significant challenges in the trends that can be identified in developments in society. If objectives cannot be met, the risk for far-reaching negative consequences for social stability, public health, quality of life, welfare and growth increases. It is important that activities which are important for society are supported by high quality research. Equally important is that research within the health and welfare field leads to usable results in the short and long-term and to effective use of resources, and contributes to objectives for growth, health, welfare and security, and safe care for all.

The key challenges that have been identified are:

- Changes in the population structure
- Legitimacy in welfare systems, including health and medical treatment
- New increasing expectations – increased costs
- Low level of inclusion – inequality

The challenges are in line with those that were highlighted in connection with the “New Worlds - New Solutions” EU Conference held at Lund in 2009¹. They are also linked to the specific focuses that were jointly proposed by the six public authorities in the “Documentation for the 2012 Research and Innovation Bill”².

It is not possible to clearly demarcate the challenges from each other as they are strongly related. Research must therefore be partly focused on issues that affect the welfare system as a whole. It is important over the next decades to create the conditions to be able through research to examine the complex connections between the health and welfare systems and the economic, social, technical, medical and political changes in society. The increased costs for the Swedish Ministry of Health and Social Affairs' main areas in relation to a sustainable labour market and growth are key issues.

Research is required in order to evaluate regulation and supervisory systems and to contribute to better transparency and responsibility within the system. Health care conditions must therefore be analysed in relation to the social determinants for health and welfare and their ability to meet new demands and expectations from citizens, and to respond to demands from the groups that do not have the ability to express them. It is also important to examine the

¹ New Worlds – New Solutions. Report from The Swedish EU Presidency Conference, Lund, 7-8 July, 2009, Sweden.

² For Swedish progress within research and innovation 2013-2016. Documentation for the 2012 Research and Innovation Bill from the Swedish Research Council, VINNOVA, Formas, the Swedish Energy Agency and the Swedish National Space Board.

consequences of change in welfare systems in respect to the ability to match the politically and culturally determined values of what is meant by a good society. Society's welfare and social security systems must be researched, evaluated and at the same time developed on the basis of society's resources and the value shifts that take place between different social and generational groups. Prioritisation within the welfare system is a major challenge that requires research not only into how and what shall be given priority, but also what the consequences will be at an individual level of a re-prioritisation, and how requirements can be met in other ways and within other parts of society. A large part of health and welfare services are provided within the informal and private sector, which thereby affects the view of the Swedish welfare system. This has a political aspect – how is a policy shaped on the basis of among other things research-based knowledge that is to the benefit of the individual? One important issue concerns the individual's responsibility in relation to welfare systems and policy.

We ascertain that

- **The altered population structure** with an increasing percentage of elderly people, at the same time as the birth rate is just under 2, means that the percentage of the population who are of working age is falling. This imposes major demands for new solutions within health care, health, social security and pension systems, working life and not least sustainable financing. More newly born babies are able to be helped to survive and new technology also enables measures for persons over the age of 80 and for groups with chronic illnesses. Such new 'survivors', that is to say the really small premature babies, the very elderly and other groups who are given the opportunity to survive, have given rise to new ethical issues, but also demands in respect to social measures for the care of those in the end phase of their lives. Continued improvements aimed at preventive public health work and new forms and methods of treatment within the health service and dental care entail new demands and requirements on the health care and welfare services. At the same time as major progress has led to improved health and higher quality of life for large groups, there are still people, for example those with disabilities, who run the risk of being excluded from working life and other aspects of social life. Furthermore, new groups with new challenges for health and welfare are arriving through immigration.

A high level of workforce inclusion presupposes a good match between people's skills and abilities and the design and organisation of working life. The organisation of working life in cooperation with childcare/school and other social support also affects the willingness of young people to have children and their ability to provide their offspring with a good childhood. A similar important challenge for research is to analyse young people's and adults' establishment in the labour market and what makes this process easier or harder. Such research concerns both the education system, the design of social

insurance and the way in which the labour market functions. The prerequisites for the elderly to be able to continue active participation in working life also require new approaches and flexibility in the organisation and management of working life. Many immigrant groups have an evident low degree of labour market inclusion, which creates a risk of social exclusion and ill-health.

- **Legitimacy in welfare systems, including health and medical care**
When changes in welfare and health care systems are implemented, they must be able to be followed up with scientific methodology and be evaluated on the basis of key outcome dimensions, society's resources and the shifts in values that occur between different social and generational groups. Globalisation challenges the prerequisites of welfare policy in regard to its organisational and economic foundations. The ability of research to examine, describe and convey complex connections in welfare systems' consequences ultimately impacts on their legitimacy.

Medical advances mean that illnesses which previously had a very short time from diagnosis to fatal outcome are now being treated and thus have become chronic with an epidemic character, for example diabetes, certain cardiovascular illnesses and lung disease. In the transformed ill-health panorama, other infectious diseases constitute a major challenge with their increasing resistance to antibiotics and global pandemics of new strains of influenza. The environmentally-related illnesses and effects on health make up another challenge. That the ill-health panorama is continually changing and leads to new challenges is nothing new but it demands continued willingness and state of readiness on the part of research.

The restructuring of the health care and welfare systems that has taken place in recent years is linked to an increased individualisation and a shift towards greater freedom of choice and self-determination. Research is required into the consequences of the reforms, both in respect to freedom of choice and the growing number of welfare services within the private sector. The view on the care role of family members, their importance and relation to the formal care services are also areas of significance for legitimacy.

- **New increasing expectations – increased costs** New technology and access to new information and communication technology contribute to the creation of new and rising expectations. Not least the development of information technology has entailed new opportunities for better access to knowledge, more choice alternatives and higher expectations for both citizens and for political decision-makers.

The bar is being raised for what is considered to be a good quality of life, which entails different requirements as to how public services

within the medical treatment, care and welfare sectors shall be delivered. The situation is complex – at the same time as certain groups have a rising expectation for greater access to the best treatment, other groups exist that do not have the same opportunities and conditions. The new so-called welfare technology can at the same time relieve regular health and care services, and creates new important conditions for growth and export. Taken together, the altered population structure and new rising expectations and new opportunities lead to higher costs for welfare services. This means that work effort, productivity and efficiency must be increased in order to be able to ensure future growth.

- **Inequality – low level of inclusion** Traditionally, Swedish society has been characterised by high inclusion and low inequality. At the same time there is empirical evidence for lasting, and in many cases increasing differences between population groups in terms of health and other welfare outcomes, particularly among those with the need for complex care services. Striving to reduce the socioeconomic health differences is an equally relevant challenge today as it was before. Health differences are linked to socioeconomic conditions including living conditions, gender, geography, ethnicity, biological and other background factors, but also to how knowledge is applied in the service providing organisations. Inequality in terms of health with growing demand for care and social services arises as a result for example of exclusion, poverty and drug problems. The challenge also includes producing the documentary basis for creating effective preventive initiatives that are socioeconomically justifiable for lifestyle-related public health complaints and mental illness in order to solve problems where several care services are required. It is particularly in the interfaces between different areas of responsibility that gaps appear, whether that is health care or social services areas. A significantly improved cooperation between the various service providers is required in order to reduce the risks that people “fall between the cracks”, that is to say they do not receive the best possible care. Different living conditions, lifestyle habits, working environment as well as unemployment and exclusion lead to ill-health and inequality in terms of health and low participation in working life and society in general. This applies, for example, to children and young people who grow up under difficult conditions or experience other difficult circumstances in school and in their relations with friends. Particular attention must be given to young people’s transition into the labour market. Disability is a major risk factor for exclusion and needs to be addressed in research. Welfare differences in the population also mean that it is essential to study social insurance and the ability of other welfare systems to counteract this challenge. The existence and development of poverty among different population groups and poverty’s relation to welfare systems and working life are important areas on which to throw light.

Chapter 3 The relevance and quality of research in relation to the challenges within the areas of responsibility

In the mandate (U2011/1435/F) to the six public agencies prior to the Research and Innovation Bill, it is stated that Swedish research shall be strengthened through among other things targeted focuses. Swedish research is strengthened by the fact that scientific quality is of the highest international class. Furthermore, it is emphasised in the mandate that the aim is that research shall help to increase Sweden's competitiveness and growth, and that the benefit for social development shall increase.

We wish to emphasise that relevance in research is crucial for whether or not objectives can be achieved, but high relevance cannot compensate for weak scientific quality. It is also important that knowledge increases about the consequences of changes for different population groups. Similarly, the challenges that we have identified often require cooperation between different research fields and disciplines, and between researchers and decision-makers, service providers and users. There is great potential for research within the health care and welfare areas to contribute to better conditions for individuals and groups, improved practice, better functioning systems within the areas, and a more sustainable society. This also includes new products and services that can also be commercialised.

3.1 The relevance of research in different areas

3.1.1 CHILDREN'S RIGHTS

The restructuring of welfare systems for children and young people has placed the focus on issues about the general welfare system's support for children and young people in risk groups, but has also made relevant the consequences of the changes in the welfare system for all children. Increasing immigration, new family formats and stronger pressure from various types of media, together with an altered view on children and young people, means that support for children is facing major challenges. Sweden supports the UNCRC, the UN Convention on the Rights of the Child, which lays down new and major requirements that need to be researched, both in respect to the general welfare policy and the policy concerning children at risk. Specifically, knowledge is required about the link between children's conditions while growing up, poverty, ethnicity and segregation/exclusion in relation to the organisation and effects of society's support, but also how children's views and rights are taken into consideration. Further research is required into children's and young people's perspectives in relation to society's support systems within both the welfare system and the health care sector, but also about their interaction with their friends and their everyday life. Research is also needed about children's sense of security in school and their access to equal conditions for learning. Focus is required on childhood and adolescence and the relation to consumption and the market, as well as to the expanding media sphere. An additional aspect of children's rights is that expanding knowledge indicates that the prenatal period is a particularly sensitive window of influence for a variety

of physical factors, stress and even low levels of chemicals. Knowledge of the effects of these areas on physical and mental health and the impact of the interplay between different environmental factors is inadequate and a greater focus is required here. The research situation will be improved to a degree by the ongoing focus on research into children's and young people's mental health.³

3.1.2 PUBLIC HEALTH

The recently produced declaration which was adopted by UN member states, the "Declaration on social determinants of health", emphasises that social, economic, environmental and behavioural determinants must be focused on in practical public health work and in particular to try to reduce health differences between social groups. Swedish research on these complex links, where social science and medical basic and needs-driven research interact, is of high international standard and is a basic prerequisite for being able to achieve objectives for good health in the whole population.

Effective preventive measures for e.g. major public diseases which are lifestyle-related could have major significance. The importance of "converting" to more preventive measures is often emphasised and there is scientific evidence for positive effects of specific measures to promote health and to prevent ill-health, such as smoking bans and physical activity on prescription, which is available for some people but not others.

Resistance to antibiotics is a threat and a challenge to public health, to groups at risk and within health care. The work that the Strategy Group for rational antibiotic use and reduced antibiotic resistance, STRAMA,⁵ has carried out over a long period has increased knowledge and Sweden has managed to keep the occurrences of antibiotic resistance at a lower level than in other countries. It is important to expand and develop this work and that which has been developed within the corresponding international network for reduced antibiotic resistance, ReAct⁶.

Sweden has long been a leading light within the Alcohol-Drugs-Doping-Tobacco-Gambling (ANDTG) field. An ongoing evaluation⁷ of the whole field provisionally proposes that Sweden should concentrate on research into use of ANDT, related damage to health and the link between them and the advantages

³ Research Programme Announcement: Interdisciplinary research programme on children's and young people's mental health, 2011-2016, in a collaboration between FAS, Formas, the Swedish Research Council and VINNOVA.

⁴ The Rio Political Declaration on Social Determinants of Health, WHO global conference, 19-21 October 2011, Rio de Janeiro, Brazil.

⁵ Stramsa, (The Strategy Group for rational antibiotic use and reduced antibiotic resistance) was formed in 1995 as a voluntary network, www.strama.se.

⁶ ReAct, Action on Resistance, www.reactgroup.org.

⁷ Early Observations and Recommendations from the Evaluation Committee on Swedish ANDTG –research, FAS 2011.

that the Swedish registers have for the opportunity to carry on translational research, among other things, are highlighted. At the same time, the evaluators ascertain that Sweden has lost ground in regard to research on public health policy issues within the ANDTG field. It is also necessary to continue to elucidate the social consequences of misuse and the forms of and results of the health and welfare services provided for addicts.

There is a need for implementation research in the public health area, i.e. research into how knowledge is utilised by the parties that promote public health. As public health and welfare are very dependent on measures, regulations and action in other areas of society, cross-sector research is also required on the effects of political decisions that can serve as the basis for future policy development.

3.1.3 DISABILITIES

Research on disabilities has increased but this remains a neglected area. Less research is being carried out on children and young people and elderly people with disabilities than on adults with disabilities and research on support and services in the public and private sectors is very limited.⁸ Technology that can function as new aids for children and young people is an unresearched area. Disability research is dominated by a medical-care scientific perspective and is strong in respect to analysis of the scientific quality. The organisations representing disabled people are demanding more research of a behavioural and socioscientific character and which can complement the medical research on disability with individuals. Complicated and complex disabilities are another important research focus as is the opportunity to carry on longitudinal studies.

3.1.4 HEALTH CARE

Medical research has had a strong position in Sweden both in regard to scientific quality and relevance. Swedish research has been of particular significance within specific areas for the understanding of etiological mechanisms and new measures and treatments. That medical research has been strong is due among other things to the fact that basic research and clinical research has been able to be closely linked through a partly coherent system for health care and research. Important research topics have been able to be extracted from the health care field to research, and the results have been able to be disseminated back to health care in the form of clinical researchers. This situation has also made it possible to gather valuable information from health care in biobanks and databases on the basis of unique Swedish national personal registration numbers. Using the databases as a tool, the actual outcome of different forms of treatment can be studied for different patient groups in respect to background variables, such as drug side-effects, co-morbidity, socio-economic factors, gender and biological markers.

⁸ Research on disabilities and functional impairment 2001-2010: Survey, and analysis FAS 2011.

Although the medical results are good in an international perspective, care is not always guaranteed or equal, a fact which is clear from the 'open comparisons' that are now made on a regular basis. There are a number of reasons for this. There are still knowledge gaps in many areas, but also where knowledge exists, it is not always utilised. Despite tools for following up and evaluating various treatment strategies for example, there is still no research into how new knowledge can be implemented in an effective manner. There is also great potential for improvements here. If new research results can be utilised quicker at the same time as non-scientifically based measures (or poorer treatments and services) are ceased, the value would increase in the form of greater quality of life for the persons concerned and for society in general in the form of higher cost-effectiveness. Research is required into how organisations and management can promote continual innovation work within health care and social services. In certain very large fields such as mental health and dental care, there are major knowledge gaps in respect to effect evaluations. The evidence for that which is carried out is poor and there is a risk that ineffective or even risky methods are used. In the numerous fields that impact on many people, for example mental illness, musculoskeletal disorders, public health illnesses such as cardiovascular illness, diabetes and cancer, small improvements can also occur in treatments and care processes as a result of new research generating major value.

Health controls and the screening of large population groups in respect to chronic illness are common, and the number of illnesses where it is possible to screen can be expected to increase in the future. One such area is various genetic tests that can form the basis for preventive measures and treatments. The introduction of such methods must be based on knowledge about the method's validity and predictive capacity. Sweden has, with its population registers, unique opportunities to carry on world-leading research within these areas.

One growing research field is various molecular profiling technologies. Results from this research can form the basis for preventive measures and treatments that can be adapted to the individual's genetic properties. The precision and effectiveness of a given treatment will be higher through such an individualisation. Another new area in which Sweden has a high level of competence is leading-edge technological research within regenerative medicine, i.e. creating tissue with the aid of stem cells in order to replace human tissue or organs. One example that has become practice is bone marrow transplantation for leukaemia patients.

However, new knowledge that can form the basis for diagnosing illnesses, and new technology and drugs that enable the treatment of more illnesses may also lead to increased costs and raise ethical issues. In order to deal with ethical issues that arise as a consequence of new research, multi/interdisciplinary research is again required where medical basic and needs-driven research collaborates with research around ethics, philosophy and law. This type of research should also examine medical diagnoses in a socioscientific perspective.

Studies exist⁹ of the value at the societal level of medical research. These all indicate that a value is generated that cannot solely be related to the value of innovations, but also that the research in itself generates a value measured in GDP (approx. 7%).

3.1.5 PENSIONS

The expected duration of working life in different occupational fields varies considerably. A pattern exists where groups with low socioeconomic status have a working life that is approx. 10 years shorter than groups with occupations belonging to higher socioeconomic groups. The difference is particularly evident for women. We lack knowledge both at individual level and at macro level in regard to what affects the decision on the time of retirement. Socioscientific research is lacking here in regard to attitudes to retirement age and how the new design of the pension system impacts in the long-term on the economic conditions of different groups. We also lack research into which work-related factors, for example stress and workload, can be explanatory factors for the duration of working life. The variation in duration of working life has consequences at an individual level but also for welfare financing. The design of the pension system also has consequences on mobility in the labour market, both between sectors and possibly also between different countries, but knowledge on this is poor.

3.1.6 SOCIAL INSURANCE, INCLUDING HEALTH INSURANCE AND PARENTAL BENEFITS

The benefits of the social insurance system are extensive and make up a large part of the Swedish economy and are of very great significance for an inclusive and efficiently functioning labour market. A well-functioning social insurance system affects practically the entire population of Sweden, and an efficient and legally regulated system constitutes an important platform for both Sweden's economic development as well as the welfare of the individual. However, there are knowledge gaps within the field. There is, for example, a need for studies of the population's attitudes to social security systems and their legitimacy. Other particularly relevant issues are:

- How the design of social insurance affects the entry of young adults into the labour market
- The effects of social insurance on the individual's health and work capacity
- The effect of benefits on the individual's economic resources, opportunities and capability, and the total effect of benefits for the individual and society, and the ability to contribute to greater inclusion

⁹ Medical Research: What's it worth? Estimating the economic benefits from medical research in the UK, Health Economics Research Group (HERG) Brunel University and Office of Health Economics (OHE) RAND Europe, Nov 2008.

- Research within major fields such as the design of dental care funding and the design and application of benefit payments
- Research into what the increased incidence of private insurance coverage means and the relation between public, collective and private insurance

3.1.7 SOCIAL SERVICES INCLUDING INDIVIDUAL AND FAMILY CARE

Research on the results, quality and effectiveness of social services has taken several steps forward in recent years, but needs to be developed. The major challenges also include studying the effects and results in a field where classic experimental methodology cannot always be applied and where complex contextual factors play a major role for the outcome of social initiatives. In this context, the prerequisites for and content of so-called evidence-based practice are key issues. Social service clients often disappear in studies of normal populations. It is therefore important to have studies that are aimed specifically at the conditions of these client groups and their opportunities to have a good life. Such studies normally require special methodology and considerable resources as there are significant difficulties connected with for example access problems and research-ethical considerations.

Today, the social service sector is characterised to an ever increasing degree by a diversity of suppliers. Private suppliers have great scope, not least within the social child welfare sector. It is important to boost research into how changes of this type affect users, service quality and content, and cost development. The conditions for society's management and control of this field are also important research issues as is how the information to users and their families shall be organised.

3.1.8 GERIATRIC CARE, INCLUDING HEALTH AND MEDICAL CARE FOR THE ELDERLY

Both the demographic challenges as well as the comprehensive changes in the welfare and health systems entail an increasing need for new knowledge and multi/interdisciplinary research efforts. The demand for geriatric care and health care will increase significantly in approx. 15-20 years time and research is needed into how old people's access to good care can be met within the framework of sustainable funding. Research is also needed in order to develop the activities within health and geriatric care according to the needs of individuals who require complex care due to suffering many different disabilities and/or illnesses at the same time. Furthermore, research is required on how geriatric care shall be designed so that the elderly in different phases of life, with different care needs, with changing social background and in different forms of care, can age while maintaining independence and influence over their everyday life.

The consequences of new management and operating forms within geriatric care and health care need to be elucidated in respect to costs, quality etc. and in

relation to equality policy goals. Research is also needed into care and welfare as a coherent system on the basis of a patient and client perspective.

3.1.9 WORKING LIFE

A sustainable, inclusive and health-promoting working life is an important determinant for good public health and a necessity for financing welfare systems. Sweden has been at the international forefront of working life and labour market research for decades, but as working life and the labour market are subject to continual change, ongoing high quality research within the field is required. Ill-health associated with conditions in working life still has considerable importance. Statistics from the EU indicate that society's total costs for ill-health caused by work are estimated to be 2.6-3.8% of GDP¹⁰.

We need to increase our knowledge, not least about which factors are important, so that young people, persons with chronic illnesses or different physical circumstances shall be able to have a sustainable long-term capacity for work and a good quality of life. The significance of the gender-segregated labour market for the development of injuries, illnesses and disorders related to work for women and men needs to be developed, not least in relation to the high sick leave figures for women relative to men.

New health risks arise in working life as a consequence of social development and changes in working life. The effects of these must be studied, and examples of such factors include exposure to nanoparticles, new chemicals, different types of stress and combination effects of various factors.

The workplace is an important arena for health promotion. Occupational health care is involved in the preventive initiatives for good health at work. Research is required here in order to develop new methods and to critically assess existing methodology. Other important areas are labour law and the significance of labour market relations for good health at work.

Recruiting and retaining personnel within the health and welfare sectors will become a challenge in the ageing society. Research has shown that an important work environment aspect for personnel within these fields is to be able to deliver good care and welfare. In order to make work more attractive, research is required on the personnel's working situation, workload and work satisfaction, and research that investigates under which organisational conditions good quality and good working conditions are possible. It is also important to follow up how working conditions within care, welfare and other social services are affected by altered forms of organisation and operation.

¹⁰ Economic incentives to improve occupational safety and health; a review from the European perspective. European Agency for Safety and Health at Work, 2010.

3.2 Research on effects, implementation and organisation

A special report produced within this strategy work dealt with implementation and organisational issues¹¹. The report points out that more research is required on successful change strategies within the health and welfare area and which effects these give rise to.

Knowledge requirements exist within “organisational and process improvement with effects on accessibility, quality and resource utilisation” and “clinical, social and organisational interventions”. Research that corresponds to these main groups are organisational studies with an economic focus, and implementation and evaluation studies.

Quality improvement and leadership within health and welfare require broad knowledge within social sciences and socioscientific fields, and within medicine, health care science and technology. In order to increase value in and quality within the health and welfare sectors, it is necessary that generalisable knowledge is applied in social processes in order to achieve better goal attainment.

Organisational studies with an economic focus are carried on at both business institutions and institutions for industrial economics at technical universities. In addition, there are now specific units and research programmes for organisational and service research at medical and health science universities and colleges. Within the field of implementation and evaluation studies, economics is an important support discipline and is known as health economics. There is a shortage of researchers within health economics. There is also a lack of research on health care as a coherent system, how it can be managed towards greater system efficiency and not just productivity in individual parts, and how they function in relation to the needs of patients and users. This often requires a multidisciplinary approach. Implementation and evaluation studies in socio-legal and sociological research have highlighted decision-making processes and management mechanisms in a number of social insurance areas, including rehabilitation, early retirement, capacity for work, disability compensation, long-term sick leave and advance payments for child maintenance. A special data bank with a longitudinal base is required in order to facilitate research into the effects of intervention procedures in rehabilitation matters. Research on management systems is important.

Areas such as e-health, e-prescriptions, decision support in health care and therapy via the Internet are examples of the significant role within the welfare technology field that information technology and social media will have in the future. In light of the prominent IT infrastructure that has been developed in Sweden during the last two decades, the prerequisites exist for national and international implementation of services and processes and increased efficiency within health and welfare.

¹¹ Implementation involves utilisation - Survey of important challenges and research issues for the design of a research strategy for the Swedish Ministry of Health and Social Affairs. Mats Brommel and Christina Granberg, Report to FAS 13-09-2011.

3.3 Research quality within different areas

Centres of excellence with long-term research responsibility have been developed under strong competition in specific areas. Such areas of relevance for the strategy where Swedish research is prominent are:

- demography
- conditions of elderly people
- health and specific areas of ill-health and cognition
- labour market economics and welfare economics
- gender-scientific perspective and equality
- global health and intervention studies within the public health area, for example in regard to alcohol and tobacco consumption

An evident strength is the plentiful existence of registers and often, longitudinal databases, and now also biobanks, in research into people's living conditions, health and participation in education, working life and society. This 'competitive advantage' in the international research arena must be safeguarded by making the databases accessible in a user-friendly and integrity-secure manner to researchers who are allocated the resources to use them. It is also important that we develop, on a continual and long-term basis, new population-based databases. Sweden also has a unique international position with large databases within the social science field.

Medical research has traditionally been excellent in Sweden. The coherent system and the valuable databases and registers have meant that there is comprehensive and good quality research in regard to determinants for health and illnesses. Epidemiological research in Sweden is considered to be very strong. No other countries in the world publish as much research within epidemiology as the Nordic countries in relation to their size.¹²

However, it is clear that research in Sweden within several medical areas, particularly clinical research, has fallen from a strong position, and diminished in terms of extent and quality in relation to other countries. In some areas though, Swedish research remains strong internationally. The Swedish Research Council emphasises neuroscience, inflammation research and diabetes/endocrinology but also Swedish cancer research within specific areas such as vascularisation, tumour immunology and epidemiological studies in connection with inheritance and environment, as being strong research areas. Global health is also stated as being a strong area. One area that the Swedish Research Council considers to be growing is health care science where the number of international citations has increased and research has become more hypothesis-driven but also interdisciplinary¹³.

¹² Global challenges – regional opportunities: How can research infrastructure and science support Nordic competitiveness, Conference 12-13 November 2008, the Swedish Research council.

¹³ Subject summaries Subject area Medicine and Health 2010, the Swedish Research Council 2010.

3.4 Research competence in specific important areas

The breadth in research within the health and welfare area means that the quality of and access to research within all faculty fields must be safeguarded. In addition to supporting and developing already existing good research, there is a need for further competence within specific areas and methods for increasing prerequisites for users to contribute to the research process.

- **Implementation, evaluation and effect research competence**

In order to be able to utilise resources effectively, it is important that different interventions within the health and welfare area are researched so that results can be evaluated in relation to the ambitions. The methodological competence to carry out effect research is good within medical research and within the labour market economics area but weaker within public health and the insurance field, and needs to be developed within insurance that is relevant for social services.

However, it is important here to point out that this also imposes demands on the responsible authorities and politicians. In order for it to be possible to evaluate policy reforms, basic statistics are necessary – which are not always available in the present situation.

- **Health economics and organisational and service insurance within the health and welfare area**

Currently there is a major shortage of economists who are interested in health economics but the area is considered to be strong in Sweden.^{14,15} Cooperation across faculty borders seems to be necessary to develop strong research environments in order to carry out socioeconomic studies of various measures within the sociopolitical area.

That part of welfare research and health care research that concerns how the service providing organisations function and are managed should also be boosted. The research field includes studies of the organisations' structure, culture, finances, organisation and results.

- **Welfare state research:** Swedish research on the welfare state/society has a strong position and represents a great breadth of subjects and research issues from the individual level to welfare systems, structures, and political and cultural processes. This research shall be given the opportunities to continue to be at an internationally high level

- **Epidemiology, statistics and informatics:** The competence is necessary to process and analyse data from the data sources that are a

¹⁴ An Evaluation of Swedish Health Economics Research, An Evaluation Report, FAS, 2006.

¹⁵ The Swedish Research Council, 2010 and the Swedish National Public Health Institute

very important resource and a competitive advantage for Swedish research. Methodological development is also required within the epidemiological area, e.g. how one analyses the outcome of recurring, fluctuating patterns and studies of complex social systems. Methods also need to be developed to gather information from groups with low participation in traditional epidemiological studies. Such groups are the socioeconomically disadvantaged, younger people and very elderly individuals. There is a shortage of statistical competence.

- **Register research competence:** The competence to research and develop data that is found for example in quality registers in health care and in databases at supervisory authorities needs to be increased. This also applies for the extensive databases that already exist and are created within the social sciences for example with unique longitudinal data within the health and welfare area.
- **Ethical research competence:** Ethical issues are common within the whole health and welfare area and the legitimacy of systems is threatened if the ethical dimension is not given a clear place in the research. The areas of responsibility of the Swedish local and regional authorities include not only response and attitude issues, but also how operations are managed and follow up fields where ethical issues are important. Allocation issues also include ethical components.

New knowledge and new technology creates new opportunities to diagnose and treat patients for different symptoms and illnesses, which means a greater need for prioritisation and ethical considerations, for example in respect to risks and benefits in relation to costs, as well as how the role of the patient in research shall be defined and handled. Ethical issues also arise in connection with the use of biobanks and registers.

- **Insurance medicine:** Research competence within insurance medicine needs to be strengthened. This means funding for research into the significance for health and welfare of social insurance, private insurance coverage, contractual insurance and other types of insurance. The number of researchers is low in relation to how extensive and important the research is in economic terms for the individual's quality of life, their health development and inclusion in society.

Chapter 4 – Profiling and structure in proposals for future focus efforts

4.1 Insurance

4.1.1 QUALITY AND COOPERATION IN BASIC AND NEEDS-DRIVEN RESEARCH

Continued support is required both for basic research and for needs-driven research, which are both carried on to a high degree in international cooperation. Basic research and needs-driven research complement each other. In basic research, new issues are identified, new methods developed and hypotheses tested on the basis of research requirements. Needs-driven research is based on areas and requirements identified outside the research world while researchers explore them further, both theoretically and methodologically. Both basic research and needs-driven research give rise to new issues and hypotheses and identify requirements for methodological development.

Both broad research funding announcements and targeted research focuses are needed. The recruitment of young researchers is essential. It is important to create a balance between free and needs-driven research. In order to maintain the quality level in research, multi-and interdisciplinary work is required in regard to both theoretical and methodological issues, as well as retaining subject depth.

4.1.2 THE AMBITION OF RESEARCH WITHIN THE HEALTH AND WELFARE AREA IS THAT IT SHALL LEAD TO USABLE RESULTS

Research within the health and welfare area extends over a number of different disciplines and subject areas. Research problems within the welfare area often need to be illuminated by different methodological initiatives of a quantitative and qualitative nature. A mix of methods can be one way of maintaining quality but also of ensuring that methodological bias does not affect the results' generalisability.

Methods have been developed within medicine to compile research reports with the aim of describing the degree to which scientific support exists for a specific initiative. The terms that are used in health care are evidence and evidence-based medicine, EBM.

EBM is understood as making decisions in respect to individual patients or groups of patients on the basis of the best available knowledge. The generalisability of these methods within medicine needs to be discussed and the use within other areas of the welfare society needs to be examined. Continued development with greater use of research-based or evidence-based practice will probably affect research within for example public health, health care services, working life and social services. The methods that are used in research need however to be complemented by other mixed methods, but there is also reason to examine in which areas method development is required in order to provide answers to important research issues in relation to changes in society, whether spontaneous or initiated by reforms. Political science, sociological/social work

and historical research can provide important and usable knowledge here in regard to the welfare system's change processes.

4.1.3 RESEARCH ON INTERVENTIONS AND EFFECTS

There is a scarcity of research into effects within the sociopolitical area. In particular in regard to preventive measures within health care, welfare, working life, social services, social security systems and welfare organisations. Intervention studies have a long tradition within medical and clinical research, treatment research, and internationally also within social psychology, and are also highly relevant for the social services area and the social insurance area, but require methods development. The current proposal of the Swedish Research Council and VINNOVA in respect to Swedish treatment research, SBF,¹⁶ aims to meet this need within health care.

As a means for improving the quality in effect studies, it is probably advantageous if several competencies can cooperate, both in the description of the research issues and the design of the studies as well as in respect to implementation and interpretation. Users have special competence in all these aspects. Political reforms within the health and welfare area should be designed so that they can be studied by scientific methodology over time.

There is a shortage of researchers with competence for studying effects by means of natural, social and quasi-experimental studies. In the work with the Delegation for cooperation within clinical research¹⁷ and the committee on clinical research, it emerged that structures for financing for this competence were lacking, and that there is also a shortage of researchers. The latter is probably a consequence of the first but also due to difficulties in emphasising and utilising the merit value in this type of research.

4.1.4 WELFARE RESEARCH AND SERVICES RESEARCH

How and what type of services within the public system for health and welfare should be provided and used in order to achieve goals are important research areas. In this context, studies of changes in the welfare system and their consequences for the individuals are essential. Welfare research is required in order to identify what is good regulation and supervision, and how such systems can contribute to better transparency and responsibility. Organisational and service research with focus on which value is generated within the welfare and health area is less developed in Sweden compared with other countries, although welfare research in general is of high quality. The research includes studying reforms and examining which political systems lead to goal attainment or not in the health and welfare organisations.

¹⁶ Swedish treatment research, SBF. A proposal for greater cooperation within clinical research, June 2011. Final report of the governmental mandate to VINNOVA and the Swedish Research Council to work for greater cooperation within clinical research N2009/99694/FIN.

¹⁷ Everyone wins through cooperation within clinical research. Final report of the Delegation for cooperation within clinical research, N2007:04, December 2009.

4.1.5 IMPLEMENTATION RESEARCH

Research-based knowledge about the effects of initiatives or measures does not mean that the knowledge is being used. In order to facilitate renewal in the various areas for better quality and efficiency, it is important to recognise the context that forms both the focus of the research as well as which effects the results have. The process from knowledge to practice is not simple. How and why factors lead or do not lead to intended changes or legislators' intentions are studied in implementation research. Research is interdisciplinary and must be carried out in close cooperation between researchers, practitioners and users.

4.2 Research support structures

Sweden has excellent conditions for research in the health and welfare areas but they could be utilised better. We wish to point out a number of support structures that need to be further developed and made to work together.

4.2.1 UNIVERSITIES AND COLLEGES

Health and welfare research has huge development potential when universities and colleges interact to a higher degree with funding bodies and stakeholders. Combination services between academia and health and welfare are an established and successful form of employment in order to discover and introduce new knowledge in the practical operations. The number of researchers with a doctorate who are clinically active has fallen significantly¹⁸. Correspondingly, researching practitioners and combination services are also lacking to a large extent within the social science research fields such as social work, pedagogy, prisoner care and research on the social insurance system. Within these research fields, combination services could occur within local authority social work, schools, the social insurance agency and at prisons and correctional institutions. What is crucial is that universities and colleges can attract doctoral candidates to areas in the full extent of their subject field, and give them career opportunities so that research within health and welfare does not stagnate.

4.2.2 INFRASTRUCTURE/REGISTERS

Registers are found in numerous areas and can be used for important and unique studies but they are not used to the extent that is possible. Registers exist that are very rich in content but need development in order to be used for research, for example by being combined with data concerning the whole population from other registers. Sweden's unique access to quality-assured data in various types of register and biobanks together with high epidemiological and subject-specific competencies should be developed by making the databases efficiently available, and research with them as a tool should be supported. This applies not least to Sweden's unique series of standard of living studies through which consequences at individual level of social changes can be measured. Research on registers in the broadest sense of the term requires legal competence, e.g. for the use of personal information, clinical data in biobanks

¹⁸ Subject summaries. Subject field medicine and health. 2010, the Swedish Research Council 2010.

and in general in order to process databases within the framework of the law. Legal competence is also essential in many welfare studies that are based on complex legal situations and need to be developed in cooperation with other lines of research.

4.2.3 KNOWLEDGE AND LEARNING ORGANISATIONS

The research will not be relevant in activities at individual level until it is implemented and is of benefit. The authorities concerned and providers of health and welfare services within the area of the Swedish Ministry of Health and Social Affairs should act as the genuine knowledge organisations they are expected to be. Then the prerequisites for both the demand for relevant research and the utilisation of this will increase. The funding bodies and the Swedish Ministry of Health and Social Affairs can impose the requirement that, independent of operating format, the organisations, public authorities and other stakeholders who have the task of promoting and improving quality of life work as genuine knowledge organisations.

4.2.4 COOPERATION FOR BETTER GOAL ATTAINMENT

Better cooperation at various different levels is required in order to achieve better goal attainment within the policy areas of the Swedish Ministry of Health and Social Affairs within health and welfare. This applies both between the Swedish government ministries concerned (Ministry of Health and Social Affairs, Ministry of Education and Research, Ministry of Enterprise, Energy and Communications and Ministry of Employment) and between public authorities and research funding bodies. Cooperation is a prerequisite for developing research, not least increased cooperation between research and the practical operations, both in the public and private sectors as well as the users. It is important in this context to emphasise cooperation at local and regional level between service providers – local and regional authorities, and private providers. Cooperation between the four funding bodies – FAS, FORMAS, Vinnova and the Swedish Research Council - can be boosted. These could, in accordance with their instructions, work together to a greater extent, and also with advantage with various stakeholders such as users, patients and business interests. Joint efforts with strategic focuses within specific important areas that have been made recently, for example in the form of centres of excellence, have been one way to reduce the fragmentation of research within the scientific disciplines. Multidisciplinary cooperation enables the use of different methods, qualitative and quantitative approaches and studies, both of welfare systems and individuals. How universities organise their research impacts on the opportunities to successfully anchor such initiatives.

4.3 International research cooperation

All research that is carried on within the policy areas of the Swedish Ministry of Health and Social Affairs takes place primarily in an international context. The knowledge that emerges should, if it is of high quality, also have a value internationally. This goes without saying in many scientific fields, and precisely internationalisation must be a comprehensive strategy to raise the quality level for the next research period. All research should be scrutinised, published and

used internationally with the aim of increasing quality and disseminating results. Given this point of departure, there is still great variety in the degree to which the quality of research is improved by the fact that it takes place in more comprehensive international collaboration and which research fields should be given priority in international research programmes. The fact that only a fraction of all research in a global perspective is carried out in Sweden also means that Swedish researchers and research stakeholders have to assimilate, scrutinise and use research that is not published in Sweden. There are significant unused resources in the form of research results from other countries and contexts that can be used directly or examined in regard to their validity for Swedish circumstances.

Extensive international cooperation and common research programmes exist for the research that is carried on within health and welfare. The largest research programme is Health (€ 6 billion) within the Seventh Framework Programme (€ 53 billion 2007-2013) within the EU. Swedish participation in these research programmes is high. The next research programme, Horizon 2020, is now being designed and health and welfare are expected to be challenges on which the framework programme will partly focus.

Several factors should be taken into consideration when evaluating which areas of research ought to be given priority in Swedish national research projects or in Nordic, European or global research areas.

- whether the research area is strongly dependent on circumstances and conditions in Sweden in particular and therefore requires that research is carried out in Swedish research environments
- whether there is a national need in Sweden at the same time as there is no international research in the field
- whether Swedish researchers have specific competitive advantages compared with researchers in other countries
- whether the benefit for business and industry is deemed to be particularly high, for example in regard to innovation opportunities.

Examples of research where participation in international cooperation should be prioritised:

Nordic cooperation

- **Welfare research:**

Comprehensive general welfare research and services research, health economics evaluation methods, working life research, public health research, equality in health, clinical research and health care research are areas where Nordic cooperation broadens the base, can make the research more effective and can provide the prerequisites for more reliable results.

The systems have similarities with each other and there is great potential for the transferability of research results.

- **Structures for the utilisation of research and the cooperation on implementation research**

As the Nordic countries have similar cultural conditions and welfare systems, the prerequisites also exist for common learning about the utilisation of research and cooperation in regard to research implementation. One example is the Norwegian focus on double competencies (research/practice) within e.g. psychology and pedagogy where experience can be obtained and cooperation stimulated by joint research schools among other things.

- **Cooperation on effect research**

High-qualitative effect research can be stronger in all areas at the same time as there are good prerequisites for cooperation and joint resource utilisation among the Nordic countries in particular. One way to stimulate the work could be to establish a Nordic effect research network and a researcher school for effect research methodology in order to promote competence development within the area. NordForsk is a body that is important irrespective of research area.

Europe

- **Common health challenges such as antibiotic resistance**

The EU has, through its identification of six Grand Challenges, highlighted in particular the ever increasing occurrence of antibiotic resistance. Research requirements concern both other ways to handle infections, and also how knowledge about the risks of antibiotic resistance and necessary changes in practice can best be disseminated so that this has an impact. They also concern research about new forms of antibiotics and how cooperation with industry can be developed.

- **Participation in Horizon 2020**

A high participation rate is being sought for Swedish researchers in the coming framework programme for research, Horizon 2020, but above all a Swedish strategy is required for allocating priority as to which cooperation shall be developed. The focus should be on areas that have been identified in this strategy as challenges. Swedish participation in the design of programmes should also be prioritised in order to ensure relevant and needs-driven research from a Swedish and Nordic perspective.

- **Joint Programming**

There is important cooperation at European level outside Horizon 2020, e.g. the Joint Programming Instrument. This means in principle that national research councils join forces over national boundaries in order to jointly finance research within broad areas, and lies outside the framework programme funding. The envisaged size of these research focus areas is such that no national funding body alone could finance these costs within

their normal research budget. Very ambitious preparatory work is currently being carried out between 14 countries on the theme “More years – better lives¹⁹”; demography and ageing and their consequences. Sweden is actively participating in this work, but in order for this focus and others in which Sweden is involved to be completed, the Swedish Government needs to take a standpoint in regard to the funding issue.

- **Challenges for the European welfare systems through increased mobility**

Increased mobility and European integration entails challenges for welfare/ social security in Europe. Mobility not only of goods and services but also of people requires that welfare and social security systems are sufficiently flexible. Research is required for example on defining systems that make it possible to earn a pension when working in more than one EU country.²⁰.

- **4.1.4 Welfare research and Health services research**

How welfare system services should be organised and which strategies lead to value creation and cost-effective systems are important research issues for all EU member states. Compared with the Nordic countries, the rest of the EU area demonstrates greater variation in respect to social security systems. This can serve as the basis for comparisons between different systems and for improvements and system innovations in different areas. In order to do this, service research and health service research needs to be developed as research areas with Swedish researchers as well.

- **Register research**

Within the EU, the regulations and administrative routines of the public authorities should handle the need to cooperate on these issues while protecting personal integrity and data security at the same time. There are good reasons therefore that Swedish competencies within registers and register research can be used in international cooperation and that Sweden can take a leading position in regard to database and register development and in the coordination of joint research projects.

International

- **Multi-centre studies on global health challenges**

Global health challenges in the form of environmental degradation, antibiotic resistance and transmission of diseases need to be met by multicentre studies. Sweden should work to ensure that global health challenges are researched in major international research programmes where research results can also be utilised in global and regional institutions.

¹⁹ More Years, Better Lives The Potential and Challenges of Demographic Change, www.jp-demographic.eu , vision paper 2011.

²⁰ Green Paper towards adequate, sustainable and safe European pension systems, SEC(2010)830.

- **Research on equality in health**

Research into differences in health and welfare for different groups is a field where there are large competitive advantages for Swedish researchers and where the opportunities are good for achieving a leading position in the international collaboration.

- **Innovations for health and welfare**

Swedish research and Swedish business and industry has a relatively good tradition of cooperation between researchers and between researchers and practitioners within medicine and health care. The strengths lie among other things in needs research and in creating interactive processes with the user in focus where technology and needs are met step by step. These advantages should be used in the international collaboration with other countries with major focus areas, e.g. in welfare technology and innovations within health and welfare.

4.4 Utilisation

The task includes the task of discussing on how work can be carried out so that results from the research come to the benefit of the relevant operations, and how research results can benefit society as a whole. Benefit in this context is understood as a change towards reduced suffering or greater well-being for individuals. Reduced suffering or greater well-being is expressed physically or mentally, and includes inclusion for example. Utilisation entails in this perspective among other things that research results are converted into knowledge, processes, products and generally better practical operations in both the short and the long term. Benefit to society includes that the operations within the area of responsibility of the Swedish Ministry of Health and Social Affairs shall be even more efficient so that the joint resources are used in a sustainable manner. It is essential for both the operations and society that there is comprehensive basic research and needs-driven research that can analyse and formulate the challenges we have previously identified into researchable issues that can result in research-based knowledge.

Actual activities for better utilisation within health and welfare can be found in particular in a governmental mandate to VINNOVA. These are:

Innovation incubators support the development of ideas for needs-driven innovations within health care and the focus on test beds within health care and geriatric care aims to strengthen innovation ability within health and welfare and business and industry's competitiveness by creating environments for testing new technology, services, organisation or ways of working. These focuses are a part of an important infrastructure.

An organisation's long-term development benefits from incorporating new solutions in its operations. However, sometimes the market lacks solutions. In such instances, innovation procurement, which is concerned with procuring innovation that does not exist in the market, is an interesting strategic alternative. This form of procurement requires, though, specialised

procurement methods that are often lacking in the operational bodies within health and welfare and need to be developed.

4.5 Projects/programmes

The funding bodies need to consider whether research areas shall be financed by long-term programmes/excellence funding or as projects, and how the balance between more comprehensive funding and projects shall be achieved. Such consideration should take place in interaction with universities and colleges in order to boost the overall effect of Swedish research.

The present most common form of funding is three-year projects that provide the opportunity for many researchers to apply for research funds where ideas are tested with a minimum of restrictions on the researcher's creativity. The disadvantage is that this funding is short-term and that the available funding is being divided up into ever smaller grants. Major research grants to centres of excellence, programme grants and strategic areas go in nearly all cases to senior or very senior researchers. In actual fact, many such senior researchers tend to be approaching retirement age. For the funding bodies, it is important that for major research focuses demands are imposed on the funding recipients to have a strategy to involve young researchers. Such demands have not yet been sufficiently stressed.

In practice, the larger and long-term operating research environments that have been created following Swedish government bills 2004/2005:80²¹ and 2008/2009:50²² are interdisciplinary or multidisciplinary and often linked to one or more organisations in the public or private sector. This perspective also applies in this research strategy. Long-term research funding can be used for research issues that shall be studied in an interdisciplinary and multidisciplinary perspective, i.e. be linked to areas outside the responsibility of the Swedish Ministry of Health and Social Affairs and where research issues need to be studied on the basis of several different disciplines.

Other areas that may require long-term funding include studies of social interventions and research on interventions in health care. These are areas that by their nature require sustainable research efforts in order to be meaningful.

The major and more long-term research funding provides assured returns in the form of publications and other results. In precisely this sense major research investments generate quality or at least quantity. One strategic issue is how young researchers shall be given scope and opportunity for creative and independent development in such large research environments.

A number of funding bodies are currently attempting to provide junior researchers with the possibility for four-year instead of three-year projects. The first impression is that this has resulted in very ambitious applications. As it is

²¹ Swedish government bill 2004/2005:80, Research for a better life.

²² Swedish government bill 2008/2009:50, A Boost for research and innovation.

clear in the strategy that certain areas of operation need to be strengthened from the base upward, the recruitment of young researchers is essential. Opportunities for longer postdoctoral positions are important in this perspective.

Appendix 1 List of documents used

Everyone wins through cooperation within clinical research. Final report of the Delegation for cooperation within clinical research, N2007:04, December 2009.

An Evaluation of Swedish Health Economics Research, Evaluation Report, FAS, 2006.

Early Observations and Recommendations from the Evaluation Committee on Swedish ANDTG research, FAS 2011. FAS 2011.

Economic incentives to improve occupational safety and health; a review from the European perspective. European Agency for Safety and Health at Work, 2010.

Research on disabilities and functional impairment 2001-2010: Survey and analysis. FAS 2011.

For Swedish progress within research and innovation 2013-2016. Report to the Swedish Government prior to the forthcoming Research and Innovation Bill. The Swedish Energy Agency, FAS, Formas, Swedish National Space Board. Swedish Research Council, Vinnova, 2011.

Global challenges – regional opportunities: How can research infrastructure and science support Nordic competitiveness, Conference 12-13 November 2008, the Swedish Research Council.

Green Paper towards adequate, sustainable and safe European pension systems, SEC(2010)830.

Implementation involves utilisation – Survey of important challenges and research issues for the design of a research strategy for the Swedish Ministry of Health and Social Affairs. Mats Brommel and Christina Granberg, Report to FAS 13-09-2011.

Medical Research: What's it worth? Estimating the economic benefits from medical research in the UK, Health Economics Research Group (HERG) Brunel University and Office of Health Economics (OHE) RAND Europe, Nov 2008.

More Years, Better Lives The Potential and Challenges of Demographic Change, www.jp-demographic.eu , vision paper 2011.

New Worlds – New Solutions. Report from the Swedish EU Presidency Conference, Lund, 7-8 July, 2009, Sweden.

Swedish treatment research, SBF. A proposal for greater cooperation within clinical research, June 2011. Final report of the governmental mandate to VINNOVA and the Swedish Research Council to work for greater cooperation within clinical research N2009/99694/FIN.

The Rio Political Declaration on Social Determinants of Health, WHO global conference, 19-21 October 2011, Rio de Janeiro, Brazil.

Research Programme Announcement: Interdisciplinary research programme on children's and young people's mental health, 2011-2016, in a collaboration between FAS, Formas, the Swedish Research Council and VINNOVA.

Swedish government bill 2004/2005:80, Research for a better life.

Swedish government bill 2008/2009:50, A boost for research and innovation.

Subject summaries Medicine and Health subject area, the Swedish Research Council 2010.

Appendix 2 List of meetings, interviews and workshops

Groups linked to the project

FAS Board: 19 May, 29 September, 16 November and 29 November 2011

Coordination group: 20 May, 30 September, 23 October 2011

Management group FAS: 6 April, 22 June, 23 September and 24 October 2011

Major meetings/workshops

Hearing 7 June approx. 140 participants (see separate list of participants)

SKL's social managers' network, 16 September

The Swedish Social Insurance Agency's strategy group, 7 September

Insurance Medicine Forum, 21 September

Deans of universities and colleges, 13 October (see separate list of participants)

Patient and user organisations, 14 October (see separate list of participants)

Workshop on challenges and research requirements on the basis of committee inquiries in the last 5 years, 18 August (see separate list of participants)

The Swedish Society of Medicine's committee, 1 November

Workshop, University of Gothenburg, 20 September

Interviews/meetings:

Gunnar Wetterberg, SACO, 16 May

Kjell Aspund, National Cancer Coordinator, 1 June

Kerstin Wigzell, 1 June

Kristina Alexandersson, Karolinska Institutet, 1 June

Per Molander, Swedish Social Insurance Inspectorate, 9 June

Staffan Arvidsson, Vinnvård Research Programme, 22 June

Laura Hartman, SNS 22 June

Fredrik Lennartsson, MYVA 17 August

Sören Berg and Anders Åhlund, Swedish Government's Health Care Committee, 1 July

Jean Luc af Geijerstam and Frida Mowafi, SBU, 30 June

Eva Karin Anderman, SVID, 11 July

Hans Goine and Siwert Gårdestig, Swedish Social Insurance Agency, 16 August

FAS subject managers: Inger Jonsson, Kerstin Carsjö and Ulla Wallin, 17 May

Gunvor Peterson, Swedish Association for Senior Citizens SPRF, 11 October

Folke Larsson, Manager FAS cooperation mandate, 28 October

Otto Cars and Anna Hedin, Strama, 2 November

Thorbjörn Larsson, Vårdalstiftelsen, 2 November

Staffan Normark, KVA, 3 November

