

A close-up photograph of an elderly man with white hair and wrinkled skin, wearing a light-colored shirt. He is leaning in and whispering into the ear of a young child with dark hair, who is also wearing a white shirt. The child has a neutral expression and is looking slightly to the right. The background is a plain, light-colored wall.

Healthcare for healthy ageing

Pre-conference report
3-4 June 2014 Uppsala, Sweden

#uppsalahealthsummit

We all know that healthcare today is faced with ever greater challenges. We are faced with both economic and ethical dilemmas, and while advances may open new possibilities for improved care, many do not reach the patient today. Continuing research and innovation open new possibilities. But as possibilities expand, so do the issues.

Uppsala Health Summit is an international arena for frank and challenging dialogue, exploring possibilities and dilemmas associated with medical advancements that can improve health and health outcome. Uppsala Health Summit stimulates dialogue from various perspectives, such as medical, economic and ethical.

Uppsala Health Summit lays the foundation for long-term relationships and insights that can help you in your work to improve health outcome in your part of the world.

Uppsala Health Summit is arranged in Uppsala, Sweden, by partners with long experience of healthcare development, who see the potential for improving healthcare and health outcome in a global perspective.

The effort is run as a collaboration between Uppsala University, the Swedish University for Agricultural Sciences, Uppsala County Council, the City of Uppsala, the Swedish Medical Products Agency, the National Veterinary Institute, the network World Class Uppsala and VINNOVA, Sweden's Innovation Agency.

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Preface

We live in a rapidly changing world. The global population aged 85 years and older will increase by 350 per cent between 2010 and 2050 according to data from the World Health Organization, WHO. The WHO also points out that the share of elderly people in the total population will grow in virtually every country in the world, with the fastest surge in less developed countries.

An ageing population is an asset to society, and a positive sign of the human capacity to implement and take advantage of new knowledge. Still, many worry about rising societal costs for healthcare and welfare.

How can we, once more, make use of our new knowledge, of innovations in medicine and medical technology, to meet healthcare needs?

This is why the partners behind Uppsala Health Summit decided to convene decision makers and opinion leaders from different parts of the world for a high-level dialogue on how we can make the utmost of research and development to meet these challenges. Our ambition is to create a forum for new insights, to help us all develop healthcare for the future.

Uppsala Health Summit will be a recurrent event. It is a collaborative effort by eight Swedish partners with hands-on international experience of many of today's most important healthcare issues. Uppsala University, an international research university characterized by diversity, breadth and academic excellence, is the host organisation. We are confident that Uppsala Health Summit will benefit society at large and inspire future research, education and collaboration.

This report will help you prepare for the discussion at the 2014 Summit, Healthcare for Healthy Ageing. We are proud to offer a programme rich in perspectives from different fields, such as medicine, sociology, economics, education and psychology, representing experiences from academia, healthcare, industry and patients.

Looking forward to seeing you in Uppsala in June!



Anders Malmberg
Deputy Vice-Chancellor Uppsala University
Chairman Uppsala Health Summit

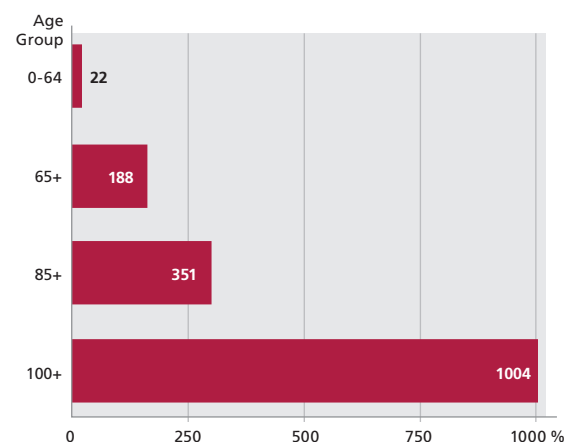
Why discuss healthy ageing?

The continuing increase in life expectancy represents a remarkable achievement of human kind. This development has entailed a broader perspective on age and ageing. A now widely used term is healthy ageing. An EU definition of healthy ageing states that the focus is upon optimising opportunities for good health, so that older people can take an active part in society and enjoy an independent and high quality of life.

More people become even older

In 2010, eight per cent of the world's population was aged 65 or older. This is estimated to increase to 16 per cent by 2050. That would equal approximately 1.5 billion people. An equally strong development has been noted regarding

Percentage change in the world's population by age



Source: United Nations, World Population Prospects: The 2010 Revision

life expectancy. Today, life expectancy at birth exceeds 80 in many countries. Japan has a life expectancy at birth of as much as 83 years (WHO).

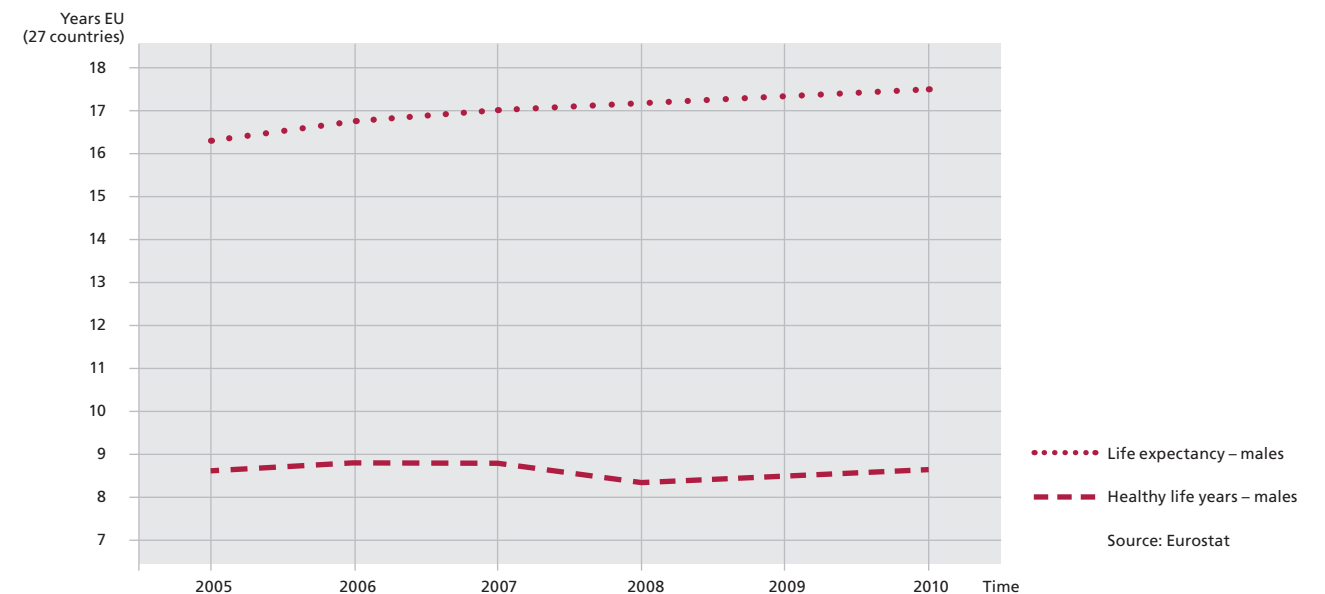
Furthermore, the oldest old are the fastest growing part of the population in many countries. Recent projections by the WHO estimate that the population aged 85 and over will increase by 351 per cent by 2050.

It is clear that we see similar patterns of demographic development all over the world, but with a certain delay in time, as for example is the case in China. The only region that is not yet following the same trend is Sub-Saharan Africa. The main reason being that the decrease in child mortality has not developed as quickly as in other regions.

Changing healthcare needs

Simultaneously there has been a change in disease patterns and cause of deaths. One of the most notable changes is the rise of chronic and degenerative diseases. This pattern is seen across the world and is not related to income level. Projections have shown that non-communicable diseases will in the next 15 years account for more than 50 per cent of the disease burden in low-income countries and more than 75 per cent in middle-income countries (WHO).

Healthy life years and life expectancy at age 65, by sex



Source: Eurostat

A question that needs to be addressed is – are we living healthier as well as longer lives, or are our additional years spent in poor health? Many researchers argue that as advances in medicine slow the progression from chronic disease to disability, severe disability will lessen, but milder chronic diseases will increase concludes WHO.

Swedish studies have shown that the prevalence of bad health and disability among the very old, people aged 77 or older, has increased since the early 90's. However, the same studies show that the older people manage their daily life better (Fors, S. et al). A similar pattern is seen in the United States where severe disability fell with approximately 25 per cent among people aged 65 or older between 1982 and 2001. This added to the fact that life expectancy has increased, shows that we live longer, but also with a better function level cites the WHO.

There are also substantial health differences among different groups in society, where the decisive factors are based on gender, socio-economic status and ethnicity. Studies have shown that these differences in health are maintained and sometimes even accentuated over time.

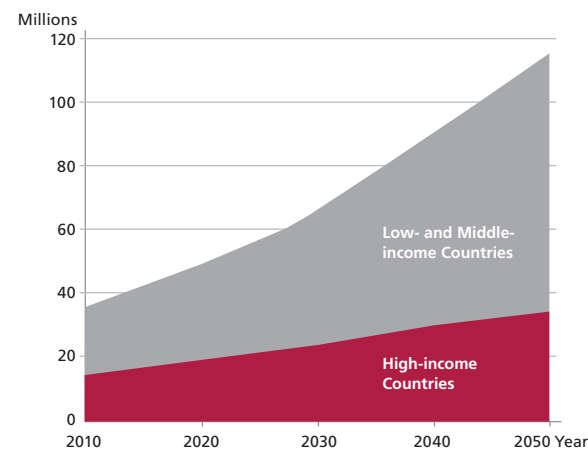
It is quite possible that the demand for healthcare and care will increase. Prevention measures and actions to increase the autonomy and capacity to manage daily life activities are critical to meet the demand. How can we use knowledge from research and innovations to further improve health and healthcare?

Rise in healthcare spending

The rising proportion of older people is placing pressure on healthcare spending. The WHO reports that governments and international organizations stress the need for cost-of-illness studies on age-related diseases. This is in part to anticipate the likely burden of increasingly prevalent and expensive chronic conditions.

The incidence of cancer is expected to accelerate in coming decades, largely because of global ageing, reports the WHO. A growing proportion of the cases of cancer will be found in the less developed world, and by 2020 almost half of the world's new cases will occur in Asia. Furthermore the WHO reports that Alzheimer's Disease International estimates that the total worldwide cost of dementia exceeded 600 billion US dollars in 2010, including informal care provided by family and others, social care provided by community care professionals, and direct costs of medical care.

Growth in number of people with dementia



Source: World Health Organization, Dementia: A Public Health Priority, 2012

The ability to control or curb the rise in costs for healthcare spending is an important part of good management of healthcare systems, and, thus, in the end part and parcel of achieving the goal of healthy ageing with autonomy.

Can we shift the cost curve?

Part of the successful development of the ageing population can be explained by general measures improving public health, not least education. Prevention, often via life-style changes is of vital importance to manage costs and improve health, not least considering the drastic increase of obesity in many parts of the world. Health prevention includes interventions to prevent diseases, to improve health and to reduce the need for healthcare service. Preventive measures are important along the whole lifespan.

As a strategy to improve quality of life and reduce the burden of chronic diseases, frailty and disability the EU has invited the member states to adopt an approach that shifts the focus towards health promotion, disease prevention, early diagnosis and better condition management throughout the lifecycle. In the 2012 EU council conclusions *Healthy Ageing across the Lifecycle*, the EU highlights “the promotion of early detection/disease diagnosis through evidence based, cost effective, affordable, equitable and easily accessible programmes and tools, including screening where appropriate”.

The other, equally important, challenge to manage costs and improve health is to ensure that treatment, care and interventions are customised also for the growing elderly population. This includes taking into consideration how to address the specific nutritional needs for the ageing population, how care for the older person is organised, putting the person in centre and how implementing technology for healthy ageing can increase the possibilities of effective disease management but also the autonomy for the patient. It also includes making sure that available medical treatments are sufficiently tested in regards to the elderly populations’ needs and conditions, particularly multi-morbidity.

So, we live longer, and seemingly have more good years, but we are also likely to have more years with chronic diseases. The demographic development shows that there will be more older, even much older, people that need healthcare and social care services. To increase our financial capacity to cope with this, increasing the number of active people in the workforce is an important part. Simultaneously, it is vital to see how we can implement knowledge, scientific evidence and innovations that research and development has generated, to help us drive down costs on a societal level while maintaining or improving health and health outcome.



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Patient registers and primary prevention

– A vision for how epigenetic studies can help us design personalised prevention programmes

Why study gene-lifestyle interactions?

Most diseases affecting middle-aged and elderly persons are polygenetic, but life-style exposures are also of major importance for the origin and development of these disorders, states Lind, L. et al in *EpiHealth: a large population-based cohort study for investigation of gene-lifestyle interactions in the pathogenesis of common diseases*.

Many studies of interactions between genes and life-style factors are hampered by a lack of power to examine more than one interaction at a time explains Lind, L. et al. The study of several interactions is the primary objective of EpiHealth and similar large-scale cohort studies. The focus of studies of lifestyle-gene interactions is also to be able to predict who has an increased risk of developing a certain disease later on in life and thereby be able to give life-style advice earlier on in order to reduce the risk.

EpiHealth

As noted above, the most common diseases affecting middle-aged and elderly subjects in industrialized countries are polygenetic and life-style related. The primary objective of the EpiHealth cohort study is to provide a resource to study interactions between several genotypes and life-style factors in a large cohort. The aim is to enrol 300 000 individuals from the Swedish population between the ages of 45 and 75 years. The study focuses on development of common degenerative disorders, such as cardiovascular diseases, cancer, dementia, joint pain, obstructive lung disease, depression, and osteoporotic fractures.

The study consists of three parts. First, a collection of data on life-style factors by self-assessment using an internet-based questionnaire. Second, a visit to a test centre where blood samples are collected and physiological parameters are recorded. Today there are test-centres in Uppsala and Malmö. Third, the sample is followed for occurrence of outcomes using nationwide medical registers.

An important aim of the study is to find new targets for interventions, both for new drugs and for specific life-style interventions tailored to the profile of individuals. This will enhance the possibility of developing personalised medicine.



Other important gene-lifestyle studies

There are other major studies with similar ambitions. The Swedish LifeGene study started a few years before EpiHealth and aims to include participants from a young age. EpiHealth focuses on participants from 45 years of age and older. The studies are otherwise comparable. In the United Kingdom a large study, the UK Biobank, was initiated several years earlier. In the United Kingdom the government and a research council approached scientists and asked them to initiate the study. Funding was then already secured. Similar projects have lately been launched in several countries, for example the Netherlands, Germany, Estonia and the US.

LifeGene

LifeGene, like EpiHealth, is a prospective cohort study with the aim to combine advances in modern biotechnology and information on individuals' health and life-style. A comprehensive baseline questionnaire designed to accommodate research questions, biosampling, repeated follow-ups including event-based sampling are key features of the initiative.

Studying gene-environment interactions requires that the amount and quality of the life-style data is comparable to what is available for the corresponding genomic data, means Almqvist, C. et al in *LifeGene: a large prospective population-based study of global relevance*. Sweden has several crucial prerequisites for comprehensive longitudinal biomedical research, such as the personal identity number, the universally available national health-care system, continuously updated population and health registries and a scientifically motivated population, concludes Almqvist, C. et al.



LifeGene builds on these strengths to bridge the gap between basic research and clinical applications with particular attention to populations. LifeGene is designed both as a prospective cohort study and as an infrastructure with repeated contacts with study participants approximately every five years. Index persons aged 18–45 years old will be recruited and invited to include their household members (partner and children).

The household-based set-up is designed to involve young couples prior to and during pregnancy, allowing for the first study of children born into a cohort with complete pre- and perinatal data from both the mother and father, reasons Almqvist, C. et al. The target of LifeGene is to enrol 500 000 Swedish people and follow them longitudinally for at least 20 years.

The LifeGene study was halted for over a year due to unclear legal status regarding the collection and storing of these amounts of data. The legislation was changed and the study was resumed in the beginning of 2014.

UK Biobank

UK Biobank is a large prospective study, which aims to provide a source for the research of the genetic, environmental and life-style determinants of a wide range of diseases of middle and older age. Between 2006 and 2010, over 500 000 men and women aged 40 to 69 years were recruited and extensive data on participants' life-styles, environment, medical history and physical measures, along with biological samples, were collected states Allen, N. et al in *UK Biobank: Current status and what it means for epidemiology*.

The health of the participants is now being followed long-term, principally through linkage to a wide range of health-related records, with validation and characterisation of health-related outcomes. Further enhancements are also underway to improve phenotype characterisation, including for example internet-based dietary assessment, biomarker measurements in the baseline blood samples and, in sub-samples of the cohort, and physical activity monitoring.

UK Biobank has shown that it is possible to establish a large population-based prospective study with a high quality of data collection, both of participants' baseline characteristics and their subsequent health outcomes. This has been made possible with an emphasis on highly efficient and centralised processes and close collaboration with the academic community state Allen, N. et al.

What possibilities does this offer?

Allen, N. et al conclude that in the United Kingdom opportunities now exist for research based on prevalent disease (e.g., there are 24 000 participants with self reported diabetes and 11 000 with breast cancer) and other information recorded at baseline. Over the next few years, large-scale research will be possible on incident cases of some of the more common conditions, for example diabetes mellitus, coronary heart disease, chronic obstructive pulmonary disease and breast cancer. The UK Biobank, as well as the Swedish studies, is available without exclusive or preferential access for health-related research that is in the public interest. The open-access nature of the resource allows researchers from around the world to conduct research that leads to better strategies for the prevention, diagnosis and treatment of a wide range of life-threatening and disabling conditions argues Allen, N. et al.



How can this information be used to improve health? A future scenario, which is being widely discussed, is a form of Health Centre. At the Health Centre the individual would meet a doctor and a health coach. Before the meeting several different forms of information would be gathered, including the person's medical charts, genetic testing, blood tests, but also psychological and sociological information. All this information would be processed and analysed.

At the meeting the relevant information would be presented to the individual along with the conclusions and possible recommendations that specific life-style interventions would benefit the individual and lessen the risk of developing a certain disease. An individual interested and committed to a change of life-style will then have a long-term relationship with the health coach who, together with the individual, would monitor various variables and assess how the interventions are proceeding. The monitoring would not just include how the individual changes or maintains changes in life-style, but also the effects on biological variables such as body weight, blood pressure, blood sugar levels, blood lipids etc.

This entails gathering information and giving information. The scenario is not a reality anywhere today, but there is an on-going discussion on how this could be organised given the stated need that individuals should and could take a larger responsibility for staying healthy.

It is also important to realise that different people have different possibilities to process and utilize this type of information. It is important that the information is offered to everybody and that specific measures need to be taken in certain sub-groups in society. In previous studies where health assessment has been offered, large discrepancies in participation were seen among different groups in society. The common result is that well-educated women are most likely to accept an offer and low-educated young men are least likely.

The areas where it seems most likely that progress will be made are food and exercise. It seems likely that we soon will be able to identify genotypes by which it would be possible to divide people into groups of those who really should not eat too much fat and those for whom it does not really matter. The same is most likely true regarding exercise; we will be able to distinguish the people who will benefit from exercise – most people do – from those for whom it does not really matter.

Challenges

The challenges that face these types of studies and this type of research are several. Two of the main areas of discussion are long-term funding and the ethical dimension of gathering large amounts of data on participants in a study where the research questions can vary over time.

Large population-based studies with repeated collection of questionnaire data and sampling over time are extremely costly argues Almqvist, C. et al. The challenge is to stay resilient over time since it is only when the data has been collected over a certain amount of time that the findings become clear. This means that both funding and participation has to be long-term.

Ethical discussions are much needed regarding population-based studies, argues Lind, L. et al. EpiHealth relies on the full informed consent of study participants and has obtained ethical approval for collection of data. In addition, each research project that is based on data and biobank samples from the EpiHealth cohort require additional ethical approval.

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Where no reference is made the information presented above is derived from an interview with Lars Lind, professor at the Department of Medical Sciences; Cardiovascular Epidemiology, Uppsala University.

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As stated above, the focus of studies of life-style-gene interactions is to be able to predict who risks developing a certain disease later on in life and be able to give life-style advice earlier on to reduce the risk of on-set. To reduce the risk of on-set or to delay on-set is of huge importance not only for the individual, but also from a societal perspective. It means more healthy years to contribute in for example the workforce, in the family situation, but also possibly fewer unhealthy years with a need for medical, social and informal care. The challenge is to find organizational and contextual forms for giving individualised information of what possible interventions would be beneficiary.



The Epihealth study is managed by Lars Lind, Professor at Department of Medical Sciences, Uppsala University, who will be one of the key note speakers on June 3.

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Life-style and prevention

– how to reach concordance?

Prevention is important along the whole life-cycle. Health prevention refers to interventions to prevent diseases, to enhance health and to reduce the need for healthcare services. With an ageing population this becomes increasingly important. The challenge entails finding ways to early on establish a healthy life-style, as well as specific interventions for people who risk developing certain diseases and also interventions for people who have already developed diseases.

The aim of the workshop is to highlight the possibility of prevention through the lifecycle. The big question is – how do we make it happen? What does the evidence say today regarding life-style changes or changes of health related behaviours which might be a more accurate term. What methods do we have on an individual level, group level and societal level? Which methods are effective? Is there a dynamic between the different levels that needs to be addressed? How can we build a society that makes it easier for people to make healthy choices?

Workshop responsible

Dr Pernilla Åsenlöf, Associate Professor in Physiotherapy, Department of Neuroscience, Uppsala University.

What is concordance in a healthcare perspective?

The term *compliance* has a long history within the healthcare sector. It refers to the need for patients to keep taking treatment or other health-related measures over a long period of time. Focus has been upon the patients being motivated to over time *comply* with the suggested interventions that would benefit their health. There is a consensus today that this term is too one-dimensional to be appropriate or effective. It has been increasingly common to use the word *adherence*, which indicates a larger amount of patient involvement. Adherence is often described as “sticking to” or “being faithful to” interventions. It clearly marks that there is a behavioural dimension that needs to be addressed. Adherence is more commonly used today.

With the term *concordance* the idea of patient involvement has been taken further. It refers to the involvement of patients in decision-making to improve patient compliance with medical advice. The use of concordance has not been implemented in the area of life-style and prevention yet, but there is an on-going discussion. The focus is on having a joint perspective of what needs to be done and that the joint perspective is a prerequisite for success. The concept of concordance is equally important between politicians and healthcare professionals. It needs to pervade the discussions of how to address challenges as well as finding solutions.

To initiate and maintain behaviour change over time

In *Supporting stepwise change: Improving health behaviours in rheumatoid arthritis with the example of physical activity* the authors argue that individual, behavioural and contextual factors need to be included to initiate and maintain behaviour change over time. They conclude that as for other health behaviours, the challenge may not be to initiate an increase in, for example, physical activity, but rather to maintain the behaviour over time.

This shift of focus from a more paternalistic healthcare model into patient-centred models means a vast challenge for the healthcare system. The transition from paternalistic models of healthcare into patient-centred models recognises patients as experts of their own disease. Successful implementation of physical activity programs within healthcare requires providers who are skilled in techniques to promote behaviour change, and Demmelmaier, I. et al suggest that both motivational and self-regulatory strategies should be considered. The authors conclude that progress is made but in small steps, and the use of, for example, motivational interviewing (MI) is getting more common among healthcare professionals.

In the research field substantial progress has been made over the last years. The challenge is to get the models recognized within the healthcare system and to find ways to implement them. As noted above progress has been made within the field of MI, which is beneficiary for several kinds of life-style interventions if used together with other support strategies. However, there is still a tendency to give patients a lot of information with a belief that information and facts will induce change, but there is today no evidence to support that. The focus must not be on the transfer of large amounts of information but on supporting the person to find his/her own incentives for change and on implementing behavioural change and support strategies.



Building interventions based on principles and evidence of behaviour change

It is important to build interventions based on principles and evidence of behaviour change argues Michie, S. et al in *Development of StopAdvisor – A theory-based interactive internet-based smoking cessation intervention*. In their paper they demonstrate the possibility of developing an internet-based smoking cessation intervention through the systematic and transparent application of theory, evidence, web design expertise and user testing. They argue that this approach could be equally applicable to the development of interventions targeting other health behaviours.

An important aspect of the intervention design above is that, since disadvantaged groups are typically less responsive to internet interventions, they engaged with these smokers early in the website development and modified content according to the qualitative feedback they received. The question of how to tackle the challenge of getting disadvantaged groups to adopt and adhere to life-style changes is commonly discussed both within the research field and within the healthcare system. This makes the ambition above to include them in the intervention design even more important.

Evaluating existing behaviour intervention frameworks

Michie, S. et al have in the design of the behaviour change wheel made an attempt to undertake a systematic analysis of behaviour intervention frameworks and apply usefulness criteria to them. The authors argue that improving the design and implementation of evidence-based practice depends on successful behaviour change interventions. This requires an appropriate method for characterising interventions and linking them to an analysis of the targeted behaviour. According to Michie, S et al there exists a plethora of frameworks of behaviour change interventions, but it is not clear how well they serve this purpose. Their paper evaluates these frameworks, and develops and evaluates a new framework aimed at overcoming their limitations. This is the first time that a new framework has been constructed from existing frameworks explicitly to overcome their limitations. Furthermore the authors mean that they are not aware of other attempts to assess the reliability with which a framework can be applied in practice.

They conclude that interventions and policies to change behaviour can be usefully characterised by means of a behaviour change wheel that includes: a 'behaviour system' at the hub, encircled by intervention functions and then by policy categories. Further research is needed to establish how far the behaviour change wheel can lead to more efficient design of effective interventions (Michie, S. et al).

Where do the individuals' responsibilities meet societies' responsibilities

Unhealthy life-styles contribute significantly to the burden of disease. Scarce medical resources that could be spent on interventions to prevent or cure suffering for which no one is to blame, are spent on prevention or treatment of (the risk of) disease that could be avoided through individual life-style changes. This may encourage policy makers and health care professionals to choose a principle of individual responsibility for medical suffering when setting priorities argues Feiring, E. in *Lifestyle, responsibility and justice*. Feiring asks, in his paper, whether responsibility-based reasoning should be accepted as relevant for fair and legitimate healthcare rationing?

Theoretically, there has been a shift in the general ideal of equality of opportunity from the traditional ideal of equality of condition to an ideal of equality that incorporates responsibility by compensating individuals for unequal circumstances while holding them responsible for their choices. The principle of responsibility implies that society ought to distribute goods and burdens in a way that is luck neutralising and choice-sensitive (Feiring, E.).

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Where no reference is made the information presented above is derived from an interview with Pernilla Åsenlöf, Associate Professor in Physiotherapy, Department of Neuroscience, Uppsala University.

Demmelmaier, I., Åsenlöf, P., Opava, C., *Supporting stepwise change: improving health behaviors in rheumatoid arthritis with the example of physical activity*, Int J Clin Rheumatol (2013) 8(1), 89-94

Feiring, E., *Lifestyle, responsibility and justice*, J Med Ethics 2008;34:33-36

This perspective has supporters, but today most people mean that the line of argument simplifies too much. Others within the research field mean that it is hugely cynical to refer to the individual's responsibility at all in these discussions. The individual has a responsibility but not by themselves. It is important that different perspectives can meet and be argued against each other in this workshop.

Another important issue to discuss is if the individual's responsibility changes when there is more individualised information to be had. If the development of genetic risk information can with a certain amount of certainty say that a person who is 30 years old has a relatively large risk of developing a certain disease – does that change what responsibility the individual has. And does this mean that certain people might have a larger individual responsibility than others?

The current progress that is made within the field of e-technologies is important for patient participation. They promote the notion that the individual has a responsibility and that the patient is part of designing the interventions and it promotes a joint perspective of what needs to be done. Another important opportunity that the technological advances have brought about is the possibility to build social communities that can help patients to maintain behavioural change over time. It is important for both individuals and the healthcare systems to adopt the new advancements that can enhance the effect of life-style interventions.

Michie S., van Stralen, M.M. and West, R., *The behaviour change wheel: A new method for characterising and designing behaviour change interventions*, Implementation Science 2011, 6:42

Michie, S., Brown, J., Geraghty, A., Miller, S., Yardley, L., Gardner, B., Shabab, L., McEwen, A., Stapleton, J., West, R., *Development of StopAdvisor – A theory-based interactive internet-based smoking cessation intervention*, TBM 2012;2:263-275

Diagnostics and screening for disease prevention

The focus for this workshop is on large-scale diagnostics and how new technological innovations in diagnostics and new research findings will affect the healthcare of tomorrow, to prevent diseases and to help us live healthier into old age.

The aim for the workshop is to try to identify the most important possibilities new diagnostic technologies can provide, the main barriers for their implementation, and concrete ways forward.

Workshop responsible

Dr Johan Rung, Department of Immunology, Genetics and Pathology, Uppsala University: Facility manager SciLifeLab Clinical Sequencing.

The translation of new diagnostic technologies into healthcare

Genetic testing is one of the new diagnostic areas that is rapidly developing and brought into routine healthcare, and will be one of the areas discussed in this workshop. A wide range of diseases have a genetic component, and with new technology it is becoming feasible to scan for DNA mutations that cause diseases or affect the risk for disease that comes from inherited genetic variants or new mutations.

Genetic testing is being used already when diagnosing and treating patients with for example leukaemia, breast cancer, or a wide range of inheritable genetic disorders. Genetic tests inform the doctor which specific mutations a patient has developed, and makes it possible to more precisely diagnose the subtype of the disease. With a more precise diagnosis, the patient can get a treatment plan and prognosis tailored for him or her, improving the chances of a good outcome. Similarly, personalised medicine can be tailored for patients depending on their specific genetic information.

New technologies are regarded with a careful enthusiasm within the healthcare sector due to the new possibilities they open for treating patients, balanced with concerns about the costs this will entail for the healthcare sector and ethical concerns about handling wide ranging genetic information, and informing the patient about how such information can be used.

Population screenings

It will soon be both technically and economically possible to do whole-genome sequencing for a large part of the population. That possibility raises a lot of questions and opens new possibilities for diagnostics, due to the fact that the information can be used to assess risk for developing diseases later in life and improve the understanding of population wide health issues. In various countries there are projects that focus upon doing such whole-genome sequencing, for example the 100K Genome Project in the United Kingdom.

The 100K Genome Project is not primarily a research project; it aims to change how clinical care is delivered to National Health Service (NHS) patients. The plan is to sequence the personal DNA code – known as the genome – of up to 100 000 patients over the next 3-5 years. This information will increase physicians' knowledge, leading to better and earlier diagnosis and personalised care.

The project's focus is on areas of current unmet need in the NHS. The beneficiary of this is likely to be patients who may now get a definitive diagnosis from the NHS. The primary focus is on rare inherited diseases, cancer and infectious disease.

It is estimated that one in seventeen people are born with or develop a rare disease during their lifetime according to The 100K Genome Project. At least 80 per cent of rare diseases have an identified genetic component, with 50 per cent of new cases of rare diseases being identified in children. However, it can take considerable time between a patients' first visit at a doctor and receiving an accurate diagnosis. The time taken to sequence a whole human genome has been reduced to one to two weeks and will become more affordable for routine use as the price continues to fall reports The 100K Genome Project.

The European Society of Human Genetics (ESHG) recommends that the use of whole-genome analysis should be justified in terms of necessity (the need to solve a clinical problem) and proportionality (the balance of benefits and drawbacks for the patient).

Issues

Improved health into old age is a major goal of genomic research. The path from gene discovery to clinical application, however, is long and challenging argue Valle and Manolio in a white paper for the National Human Genome Research Institute. They mean that applying genomic discoveries to clinical problems raises several key questions. One being; how will patients and clinicians respond to information regarding individualised genetic risk and what strategies and resources will be most effective in educating them to maximize

health benefits and minimize potentially negative aspects such as stigmatization and anxiety? And also, what special approaches to genetically based diagnostic and prevention strategies may be needed in special populations (such as prostate cancer in African-Americans) or high-risk groups (such as workers with benzene exposure)?

More information than asked for

Another important aspect to consider is what has been named “incidental findings”. This refers to broad genetic testing showing an enhanced risk for developing another disease later on in life than the one that was initially examined. The discussion regarding this has primarily been focused upon if patients should be informed of the findings or only about the one that was the original reason for the test.

European Society for Human Genetics (ESHG) and The American College of Medical Genetics and Genomics (ACMG) have come to different conclusions and published different guidelines on this topic. ACMG initially recommended that a list of 56 genes were always to be tested and reported back to the patient. The genes on this list are potential sites for strongly inheritable and life threatening conditions, and it was deemed beneficial for the patient and relatives to gain this information. The questions that then arise are; does one know what is beneficiary and does the patient have a right not to know the information. In a recent amendment to the American guidelines, it is now possible for the patient to opt out of the testing before it is done. In Europe the dominant perspective is that only findings related to the disease that was the reason for the test should be reported to the patient, unless the other findings can and need to be treated.

Another important issue that has been raised is how the potential for stigmatization and anxiety among patients and/or family members can be reduced? This is a complex issue. It is also very personal, how different people want to handle the information, for instance in regards to hereditary diseases. If no treatment options exist, and if the onset of the disease is at a much later stage of life, how will the patient deal with the information?

Should family members who are at risk of having the same inherited mutation also be informed and offered to be tested?

Science for Life Laboratory, Sweden

Large-scale projects like the 100K Genome Project demand a very large infrastructure for handling all the data, and there are also several unresolved questions regarding who has access to the data etc. The area of “personal genomics” is on the advance and there are important issues to discuss regarding how large scale genetic testing for individual patients can be implemented in order to arrive at an exact diagnosis for many different genetic diseases.

In Sweden, Science for Life laboratory (SciLifeLab) represents a large-scale effort for health research and infrastructure provided through a range of technological platforms. A new platform for clinical diagnostics that includes several different techniques has recently been started. The new platform is primarily directed to the healthcare sector and aims to implement the latest diagnostic methods, like “next generation sequencing”, in the clinics. In another large-scale effort, SciLifeLab recently announced the Swedish Genomes programme, which will fund whole genome sequencing for new research projects, including common diseases and healthy control samples from the Swedish population. These investments are steps forward in Sweden for making new genomic technology useful for the health of the general population.

Policy challenges

There are several policy and guideline challenges to be met. Valle and Manolio raise important questions in the white paper for the National Human Genome Research Institute. For example, what are the best approaches for developing guidelines for clinical use of genetic testing and what is the appropriate role of the major stakeholders (patients, clinicians, payers, etc) in developing guidelines? And, how should models of evaluative, evidence-based medicine be incorporated in guideline development and clinician decision-making?

The ESHG has presented a set of recommendations in regards to whole-genome sequencing in healthcare. One of which calls for establishing guidelines. The ESHG mean that in order to develop best practices in implementing whole genome sequencing into healthcare, stakeholders from relevant fields of research and clinical work should set up structures for sharing experiences and establish testing guidelines at local, national and international levels.

The ESHG also state that guidelines for how to establish informed consent regarding diagnostic testing need to be developed. Patients’ claims to a right not to know do not automatically over-ride professional responsibilities when the patient’s own health or that of his or her close relatives is at stake. Patient groups could provide important input into how this should be handled.

The changing interaction between patient and doctor

Other forms of large-scale and technically advanced diagnostics are being used more and more often in healthcare. Patients are being encouraged to measure certain health parameters, like blood pressure and blood sugar levels themselves with simple home-tests. We can see a future scenario where patients do more and more testing at home with help from distributed diagnostic techniques, and doctors can then include more data in their assessments than the information they can gather during a visit at the clinic.

Questions that arise are how all this data can be processed and become part of the decision-making process and how the relationship between doctor and patient possibly will change if the patient himself or herself is responsible for the testing that the diagnosis is based upon? Does it mean that patients that find it easier to grasp and use new technology will get better care?

All the information and the diagnostic data that the patient will receive gives the patient the opportunity to try to more actively understand possible diseases, health risks and treatments. But, the risk for misunderstandings is great and it is important that the information is discussed with a doctor. Furthermore, it might be necessary to create systems to help patients handle personal health information and diagnostic results.

Societal costs and benefits

The societal impacts of early disease detection or prevention can be huge. Will the benefits of advanced and large-scale diagnostics really outweigh the costs? Advanced diagnostic technology and population screenings may improve the chances to prevent diseases or detect them at an early stage, but how should the costs and benefits be calculated and balanced, when the benefits may not be reaped until decades later? The investment from society that early detection programmes represent comes at a large cost, and possibly profound changes to the healthcare system and its economy may be required in order to deliver the promises of new large-scale diagnostics for a healthier ageing for the whole population.

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Maximizing Public Mental Health

Empowering strategies and determinants of mental health in elderly population

A sense of existential and social cohesion, a feeling of mastery, and self-determination together with an experience of dignity, status, identity and respect are shown by research evidence to be the most fundamental prerequisites for an individual's ability to keep physically and mentally healthy, and for achieving a better quality of life for those with chronic and/or other health problems. These empowering strategies are the hallmarks of resilience.

The aim of this workshop is to show that these fundamental and lifelong determinants of mental health are equally vital for the elderly as for those at other ages in the life-cycle, and are the domains for public mental health promotion.

Central questions that the workshop will aim to cover are: Where is the link to public mental health in our understanding of public health for elderly populations? Do our healthcare structures understand and build upon culturally- and gender-informed mental health needs and resources? What kinds of obstacles exist in our healthcare- and service sectors that can obstruct a public mental health promotion orientation? What societal, organizational, cultural and individual resources exist but are currently not being utilized for improving public mental health strategies for elderly populations?

Workshop responsible

Valerie DeMarinis, Professor of Psychology of Religion and Cultural Psychology; Research Director, Public Mental Health Promotion research area through the multi-disciplinary IMPACT research programme at Uppsala University.

No health without mental health

The WHO states that there is no health without mental health (WHO, 2004). In the European Psychiatric Association (EPA) guidance on prevention of mental disorders the authors, Campion et al (2012), conclude that good mental health is the basis of all health. Furthermore, positive mental health results in health, social and economic benefits, which are not simply due to absence of mental disorders. It is important to remember and to take into account that the same principles regarding mental health make sense all along the life-cycle.

It is therefore worrying that several studies have shown that mental disorders are not recognized in elderly patients with physical disorders. As research results from Ho et al. (2014) indicate, medical comorbidities and depression exert additive and multiplicative negative effects on functional disability and quality of life. They argue that the negative impact and benefits of treating simultaneous mental and physical conditions need to be addressed in clinical practice. Compared to medical comorbidity, depression among older persons was associated with relatively worse daily activity functioning and quality of life. Together, depression and medical comorbidities predicted considerably worse functional disability and quality of life impairment than either one alone. These findings highlight the importance of having an integrated approach regarding mental and physical health, and understanding how one affects the other.

Prevention of mental disorder and promotion of mental health

In the EPA guidance on prevention of mental disorders, emphasis is placed on both prevention of mental disorder and promotion of mental health as key parts of the work of mental health professionals. However, this has often been overlooked partly because training is focused on diagnosing and managing mental disorder but also due to lack of resources. There is considerable evidence in the literature suggesting that preven-

tion has the potential to significantly delay the onset and reduce the subsequent burden related to mental disorder as well as related personal, social and economic costs (Campion et al., 2012; Kalra et al, 2012). The age of onset is important when examining opportunities for prevention, because studies have shown that half of lifetime mental illness (excluding dementia) starts by the age of 14 and 75 per cent by mid 20s (Campion et al., 2012; Kalra et al, 2012).

The distinction between prevention of mental disorder and promotion of mental health is important. Mental disorder and mental health are not opposite ends of a single spectrum. Absence of either mental health or mental disorder does not imply the presence of the other. Rather, promotion of mental health and associated resilience contribute to prevention of mental disorder. (Campion et al, 2012; Kalra et al., 2012).

The consequences of unmet needs

No other health condition compares to mental ill health in relation to prevalence, years lost to disease, and breadth of impact. Mental disorder has been shown to impact at all levels: individuals, families, communities and wider society indirectly (Kalra et al., 2012; Rutz, 2007).

There is considerable evidence that a number of psychiatric conditions can be prevented through the implementation of effective evidence-based interventions. Such interventions are particularly important during childhood and adolescence, since a large percentage of lifetime mental illness starts before adulthood. Prevention is also important for the long-term reduction of the burden of mental disorder, since once it has arisen, treatment can only reduce a relatively small proportion of such burden (Campion et al., 2012). The challenge for clinicians is to incorporate evidence-based interventions into clinical and non-clinical practice as well as to engage with other service providers. A promotion of mental wellbeing can both prevent mental disorder as well as aid in the recovery from mental disorder

The importance of nature and culture for mental health

The positive experience of proximity to nature has a balancing and healing effect as Ottosson and Grahn (2006) found in their Swedish study in geriatric care residences. They found that the people most affected by their surroundings are those with the greatest psycho-physiological imbalance. When the balance tilts, the balancing effect of the green experience can restore the individual to a state of better harmony. Time spent in the outdoors is, therefore, especially important for individuals who easily lose their equilibrium or find it difficult to make compensatory changes to restore harmony on their own.

Cultural activities and exposure to music are other important areas for interventions. Studies have shown the importance of cultural activities and cultural experiences for a sense of wellbeing. It is important to have a promotional philosophy of approach for interventions with people of all ages (DeMarinis et al., 2011). The question is how these needs can be addressed within a social care setting. How can this become an integrated part of caring for older people's mental and physical health?

Meaning-making and spirituality for mental health

Another important area in mental health promotion and prevention is meaning-making and spirituality. The past decade has seen an increase of interest across disciplines in spirituality within the context of healthcare (Williams, 2006). Findings from a large meta-summary, which included studies with participants who had cancer, HIV/AIDS, cardiovascular disease and ALS, confirm the fundamental importance of spirituality at the end of life and highlight the shifts in spiritual health that are possible when a terminally ill person is able to do the necessary spiritual work. Williams concludes that existing end-of-life frameworks often neglect spiritual work.

The question is how a Swedish version of spirituality can fit in with secularized Swedish culture. It has been argued that maybe in Swedish and other Scandinavian contexts meaning-making and finding what provides existential meaning to each person might be a better approach as it can include religious traditions as well as personalized expressions of spirituality including experiences in nature and through the arts (DeMarinis, 2008). It is important to remember that people make meaning differently. This is a very understudied research area within healthcare in Sweden. Another important aspect is to make sure that the respect for older people's privacy and personal space does not hinder their possibility to be invited to and to share in various activities that may impact their sense of wellbeing.

Factors associated with active ageing

The continuous population ageing has raised international policy interest in promoting active ageing. Studies have shown that the most important components of active ageing are associated with education, marital status and occupation. However the patterns of associations seem to vary in different countries.

Perales et al. (2014) have shown that there are differences in active ageing related to country, age, education, and occupation. Finland has scored consistently the highest in active ageing followed by Spain and Poland. Younger age, higher education, occupation, and companionship are factors generally associated with active ageing.

To meet some of the challenges that have been highlighted and that societies face regarding healthy ageing, Jeste and Palmer (2014) propose a new model for geriatric psychiatry to help meet the needs of a rapidly growing population of older adults. They mean that a positive old age psychiatry should focus on recovery, promotion of successful ageing, neuroplasticity, prevention, and interventions to enhance positive psychological traits such as resilience, social engagement, and wisdom.

Challenges

Deficiencies in promotion of mental health and prevention of mental disorder lead to illness and malfunction – with stress-related physical- and mental disorders and cardiovascular death as well as suicide as the most dramatic outcomes (Rutz, 2006; 2007).

These domains are culturally sensitive and linked to factors of meaning, access to meaning-making opportunities, influenced by secularization and pluralism, as well as to prerequisites reflecting an individual's social cohesion and integration in family and other social networks, including healthcare structures and organizations. Building healthcare and social/community programmes

reflecting these domains is dependent upon a philosophy of approach that understands the function of resilience throughout the lifecycle (DeMarinis et al., 2011), and the dramatic impact resilience plays in creating and sustaining healthy ageing and coping strategies. This approach is essential for both the promotion of mental health as well as the prevention of mental disorders. As Rutz (2006) notes, re-conceptualizing social and societal psychiatry with focus on public mental health must have a renaissance, as innovative efforts are of crucial importance seeing mental health in the light of recent experience and science is probably the most important public health issue.

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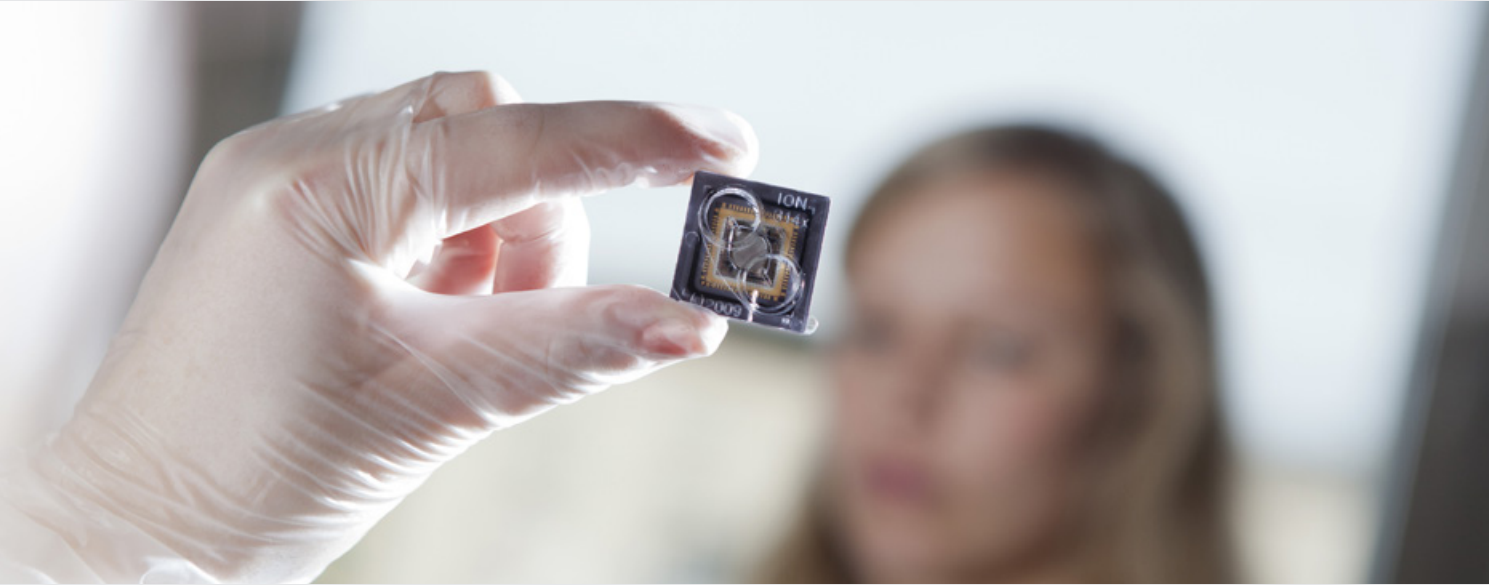
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GE Healthcare



GE Healthcare is one of the sponsors of the Uppsala Health Summit. GE Healthcare's main focus is on helping customers to deliver better care to more people around the world at a lower cost. In addition, GE Healthcare partners with healthcare leaders, striving to leverage the global policy changes necessary to implement a successful shift to sustainable healthcare systems.

To gain further perspectives and insights on the subject of healthy ageing we have interviewed the head of European Government and Public Affairs at GE Healthcare, David Boyd (DB), and Chief Medical Officer Dr Alan Davies (AD).

What are the main challenges that the healthcare sector faces today in regards to healthy ageing?

DB - Healthcare systems need to adapt to create better integrated healthcare networks and to support individuals to stay healthy for longer. Integration will go beyond what we traditionally think of as part of the healthcare system, it will go way beyond the hospital, way beyond the primary care facility, and into the home. Inter-connected care will have to embrace how the consumer looks after their life. Innovative technologies are increasingly available to help address these challenges and to empower and inform consumers. Their funding can be challenging for policymakers, as the issue of affordability and the barrier of siloed funding are

inevitably presented when innovative products become available. However, the long-term cost benefits of investment in the right technologies and solutions are becoming clearer, and the much needed coordination and cooperation between the different units of healthcare and social care system is beginning to emerge.

AD - Individuals have to be placed at the centre of the care management process. To have any hope of facilitating behavioural change, or to work towards preventative measures and early diagnosis and intervention, you have to talk directly to the consumer and you have to encourage them to do the right things and to seek help early and not just assume it is going to get better. Inaction on these fronts is to risk the more costly overburdening of our casualty departments.

Everybody has a responsibility and a contribution to make

DB - Resolving the growing burden of health-related issues is as much about promoting policies that encourage behavioural change, and the detection and treatment of diseases earlier, as it is about treating late-stage disease. These are major challenges. However with today's advances we already have many tools at our disposal including the continuing force of technology to support such efforts. Technology will provide avenues for people to engage in health promotion and prevention; we

have to ensure that societies are providing information that is easily understood and accessible to individuals. And individuals must be committed to their own health and staying well – there are all sorts of discussions on how to do that; is it with a carrot or with a stick?

AD - In the future the mandate of healthcare professionals will significantly broaden. No longer will the role of doctors, nurses and allied health professionals be primarily understood as simply treating ill health. Instead their roles will be viewed as also supporting people in maintaining their health, to help prevent people from becoming unwell in the first place. And when treatment is necessary, its success will also be judged using broader criteria; the emphasis on clinical outcomes being just one indicator contributing to the measurement of improving a patient's quality of life.

What are the main policy challenges that societies face today regarding healthy ageing?

DB - Ultimately, we need to dispel the view that healthcare is a cost, and instead view healthcare as an investment. If we cannot do this, then we risk making false economies by not investing in appropriate solutions – false savings that may stop new technologies with long-term savings across health, social and employment budgets.

AD - People have to understand that healthy ageing is not about the elderly. You can take it to the extreme and say that healthy ageing begins in the womb. Improving our 'healthspan' is a notion we must responsibly nurture throughout our lives if we are to avoid the combined burden and impact of largely preventable chronic diseases that are straining our healthcare systems.

Why sponsor an initiative like the Uppsala Health Summit?

AD - The biggest issue is chronic disease. There has been a lot of focus over the past seventy years on mortality – who is dying from what and what disease are they dying from. The burden of healthcare now is much more around maintaining people who have an increased propensity of developing chronic diseases, which they live with for many more years than ever before. We also know that when you have one chronic disease you often develop others, a situation which is having an unprecedented impact on healthcare systems and is clearly unsustainable. The urgent focus now is on prevention, early diagnosis and early treatment to compress morbidity.

Regarding the Uppsala Health Summit, we very much have a thought leadership approach, a company that helps to facilitate the policy discussion and help bring together the science, the medicine, the policy, and the providers.

DB - The absolute, undeniable fact here is that in some ways the current problems for western societies, and in some developing nations as well, regarding ageing and the chronic disease burden is that it is a consequence of our success in other areas of medicine and public health. This dramatic improvement in lifespan and better public care and medicine – means that we now have to readjust the healthcare system to cope.



David Boyd,
head of European
Government and Public
Affairs at GE Healthcare,
speaking at an AmCham
EU Seminar



Dr Alan Davies,
Chief Medical Officer,
GE Healthcare

Food for Ageing

– Individual and societal perspectives

With an ageing population it is needed, both from an individual and societal perspective, that preventive and treatment measures are taken to ensure that hopefully a majority of the older population will achieve high functional levels, in order to maintain and, when possible, restore an active life-style. Ageing should be regarded as a positive phenomenon, and the older part of the population as an asset for the society.

This workshop will focus on the impact of food on healthy ageing and ageing well from various perspectives. The workshop will address life-long dietary and nutritional needs to promote healthy ageing, i.e. an individual preventive track. Moreover, the special nutritional needs of specific target groups will be addressed, according to the risks of developing sarcopenia, frailty and cognitive decline.

How can we eat for healthy ageing? What can the old individual do and eat to maintain good cognitive and physical function? How can society address the specific nutritional needs of the ageing populations? What are the cost savings of a healthy life-style?

Workshop responsible

Professor Tommy Cederholm,
Department of Public Health and Caring Sciences; Clinical Nutrition and Metabolism, Uppsala University.

Dr Rikard Landberg, Department of Food Science, Swedish University of Agricultural Sciences, Affiliated researcher at the Nutritional Epidemiology Unit, Institute for Environmental Medicine (IMM), Karolinska Institutet.

Can we eat for healthy ageing?

There is today sound and substantial scientific evidence on what to eat to promote healthy ageing. Eating well may mean different things, e.g. prevention of diseases for healthy ageing, or maintaining or restoring body functions during ageing. It is also reassuring that the body has a remarkable capacity to renew itself.

The aim of the workshop is to discuss current knowledge and to give advice on how to enhance the possibility to keep healthy, and not to develop certain diseases through the course of life. The major question is; how to maintain a good cognitive and muscle function at higher ages? The interventions will focus on foods, physical activity and life-style.

A number of studies have shown the effects of preventive life-style measures. In 2007, the World Cancer Research Fund (WCRF) and the American Institute for Cancer Research (AICR) issued recommendations on diet, physical activity, and weight management for cancer prevention on the basis of available evidence. Vergnaud et al have shown in the European Prospective Investigation into Cancer and Nutrition study (EPIC), where almost 400 000 participants from nine European countries were enrolled that a high WCRF/AICR score was significantly associated with a lower risk of dying from cancer, circulatory or respiratory disease.

Do we know what to eat for healthy ageing?

Nordic nutrition scientists regularly evaluate recent and current research in order to provide recommendations for healthy eating. The Swedish National Food Agency (NFA) has translated this knowledge into a set of five main recommendations that emphasize eating more fruit and vegetables, choosing products mainly based on whole grain, eating fish more often and using non-saturated fats when cooking. The National Food Agency has, in collaboration with other Nordic food agencies, developed the keyhole symbol in order to help consumers make healthier

choices. In 2013 the latest up-date of the Nordic Nutrition Recommendations were issued, which was the result of 100 Nordic experts combined efforts. The recommendations have been slightly adjusted compared to the previous recommendations, but the main scope has been stable.

There is also substantial knowledge today of what elderly should eat to maintain a good functional level. The recommendations for older people differ relatively little from the recommendations that are intended for all age groups. The old adults have lower energy demand than younger people, but their need of important nutrients is equally high. Main distinctions are that elderly have slightly higher protein and vitamin D needs. The food of older people needs to be more nutritious, i.e. nutrient dense, due to the fact that they tend to eat less, whereas the nutrient needs, e.g. vitamins and trace elements, are the same.

In the context of the EPIC Study, the role of a good diet for longevity of elderly Europeans was addressed. The key objectives of the project were to identify the prevailing dietary patterns among the elderly participants and to examine the socio-economic and demographic factors that may affect dietary patterns that are beneficial for longevity.

In line with many parallel and subsequent studies, EPIC identified a Mediterranean like-diet as being particularly beneficial for longevity. Observational as well as randomized controlled trials have shown that, from a Nordic perspective, similar effects can be obtained by using Nordic food items such as whole grain rye, oats, fatty-fish, cabbage, berries, apples and pears (Adamsen, V. et al, Olsen, A. et al).

Food perspectives in municipal home care and nursing home care

An important perspective of the workshop is to discuss how to eat when you are elderly in order to maintain an active life-style. The Swedish National Food Agency has recently undertaken a literature review of the scientific evidence regarding food habits for elderly in municipal home care and nursing homes. One observation was that other people's presence at the table affects how the person experiences a meal. The numbers of people that share the meal influences the food and energy intake also among elderly still living in their homes. Studies of elderly in nursing homes have shown that social interactions and social commitment during the meal increase the feeling of well-being, gives a higher body mass index (BMI), less weight-loss and a higher perceived appetite (*Vetenskapligt underlag till råd om bra mat i äldreomsorgen*).

The Swedish National Food Agency states that it is important to raise awareness among professionals of the importance of their actions. There is a need to emphasize that care providers need to view the meal from the elderly's perspective. One way could be to develop instruments to evaluate the meal environment. There are descriptive studies that show how elderly people would like the meal situation to be to give a feeling of well-being. Tools for meal observation, and standards for how a good meal environment should be could give professionals, managers and politicians indications of what works well today and what needs to be developed (*Vetenskapligt underlag till råd om bra mat i äldreomsorgen*).

Societal benefits of healthy eating for active ageing

Healthy elderly people are a societal asset. This can be quantified, which means that the benefits for the society of preventing disease can be stated. If elderly people are healthy and active, the risk for hip fractures and many other age related illnesses decrease. Furthermore, active and healthy

older people can do their shopping themselves, cook their own food, baby-sit their grandchildren etc. All these things need to be taken into account when discussing the societal benefits of eating healthy for active ageing.

It is possible today to see the effects of dietary advice that were given during the 80s. People started to eat more fruit and vegetables and they improved the quality of their fat intake, i.e. reduced the intake of saturated fats and increased the intake of unsaturated fats. This change together with for example reduced smoking has resulted in a decline in cardiovascular disease. In the meantime people in general are less physically active and have adopted other non-healthy eating habits, like increasing the intake of refined carbohydrates and sugar. Today the greatest health challenges for the society are obesity and diabetes. This entails new challenges. Now the main focus is on decreasing the amount of food that people eat, increase the level of physical activity, decrease the amount of refined carbohydrates and sugar, and to maintain a good balance of the fat intake.

Innovations in the food industry

The food industry has an increasingly important role to play regarding food for healthy ageing as well as for food for the old adult. One part of the challenge concerns over-eating, others are to find foods being both healthy and tasty from a public point of view. Further challenges are to develop products with positive effects on blood lipids and blood sugar. Also to develop products that are satiating for younger people at risk for obesity, and that stimulate appetite in old adults at risk for weight loss and undernutrition. Moreover products that promote bowel function, that maintain cognitive function to mention some examples.

Challenges

Developing foods for healthy ageing means to make active decisions today that may not give effect until in 15-20 years. This is a great challenge when it comes to convincing people to change their habits and more importantly to sustain changes over time.

Another challenge that has been highlighted by the National Food Agency is the role that health professionals play and the knowledge base of such people. NFA has shown that there is a certain amount of ignorance among nurses, doctors, municipal food managers, teachers and science journalists of what are good dietary patterns and of some of the dietary advice (*Synen på bra matvanor och kostråd*).

Socio-economic conditions provide a number of current and future challenges. There are major health differences between socio-economic groups, between people with high and low levels of formal education, between men and women and between people in single- or joint households. The differences are maintained over time. In certain cases such variations may be even enhanced among older people. One important question to address is how society and public health initiatives best face such inequalities.

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On the basis of the current knowledge we cannot say with certainty what interventions are needed to specifically benefit less active older people with a low level of formal education (*Ett hälsosamt åldrande Äldrecentrum*).

There is a lot of media attention regarding food, nutrition and health. This has created a certain amount of insecurity among people in general. Influential professionals provide various opinions, the professional discussions are public and the media is quick to add fuel to the debate. Some of the more popular diets, with for example a high intake of protein and fat, are in conflict with the knowledge of what comprises good food for healthy ageing. These are important issues to address.

The individuals' vs. the societies' responsibility

The aim of this workshop is to focus on what the individual can do, but also how the society may facilitate and enhance positive developments. The individual is in charge of his or hers life-style, but society can support by promoting knowledge of what are good steps to take to increase the potential of healthy and active ageing.

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Care for the person, not for the system

– a person-centred perspective on the
cooperation between care and healthcare

An increasing number of individuals lead healthy, active, long lives. The very oldest are often, however, described as a frail group, particularly vulnerable to disease, disability and loss of the ability to manage everyday activities independently.

In this workshop we will focus upon how we can meet older multi-morbid persons' needs for care and nursing and how healthcare for older people should be organized, centred around the person.

Which experiences can we build upon? What changes do we need to induce on a systemic level? What main challenges do we need to identify?

Workshop responsible

Dr Barbro Wadensten, Senior lecturer, Department of Public Health and Caring Sciences; Quality of care and safe care.

Dr Susann Järhult, MD Emergency Care, Department of Medical Sciences, Uppsala University and Uppsala University Hospital.

Dr Åsa Muntlin Athlin, Researcher, Department of Public Health; Quality of Care.

The very oldest

The very oldest form a heterogeneous group with varying and changing medical, care and rehabilitation needs, which require a variety of professional measures. The group therefore represent a large share of care service and medical care consumption. As the group of older people is growing, both in absolute numbers and as a share of the total population, this puts pressure on welfare systems.

Emergency care

Frequently, the need for increased healthcare support for older people is suddenly revealed in the event of acute illness, as the individual is directed to an emergency department. The role of the emergency department is to provide immediate care and treat acute conditions, after which there may be a need for continued care. It can also be the case that the person cannot return to living in his or her home due to uncertain physical or mental conditions often due to age rather than disease.

Several studies have reported a high rate of hospitalization among individuals 65 years and older, when seeking emergency care. Medical assessment of patients in this age and above generally takes longer than the assessment of younger patients, for several reasons. Primarily, distinguishing chronic from acute medical conditions and interactions between, and assessment of, multiple medications are daunting tasks. Impaired mobility, difficulties getting dressed and undressed as well as uncertainty on the individual's "normal" functional level makes it harder in the acute setting. Moreover, communication might be challenging, due to hearing-loss, poor vision or dementia.

Older adults use proportionally more emergency department services than any other age group and their use has increased over the past several years. A review on literature on emergency department use by older adults in for example the United States, United Kingdom and Canada has shown that the disproportionate emergency department use by older adults is not the result of "inappropriate overuse". Moreover, the review reveals that access to a primary care provider appears to prevent the need for emergency department care, though it is less clear how supportive care services affect this need (Gruncir et al.).

However, a review of literature on research and service evaluation evidence did not show that nurse-led case management services had a significant impact on emergency admissions in the United States and United Kingdom (Lupari et al). Regardless, if the emergency department often becomes the place where it is discovered that care for an older person has not been properly organized, the solutions should focus on other actors and activities.

Person-centred care

Patients who do not require inpatient care might still urgently need community resources in the form of municipal home help or care in a nursing home. We need to develop innovative solutions to be used within the care system to meet people's immediate needs. The concepts of person-centred care and patient participation are considered important in both medical and care services. The question is how demands for such an approach can be met in frail, older persons or persons with dementia. How should we provide person-centred care to older people with multi-morbid chronic conditions?



Access to case management services has a positive impact on the patient as well as on the carer and the healthcare staff. This is shown in a review of available literature on research and service evaluation evidence of nurse-led case management services targeting older people with multiple chronic conditions in their own homes (Lupari et al). However, the review could not identify significant impact for case management on emergency admissions, bed days, nor costs.

Another form of person-centred care that has been widely discussed is the *patient-centred medical home model*, which builds on substantial evidence demonstrating that greater emphasis on primary care can result in higher quality care at lower cost. Insufficient attention has been paid to the delivery system reforms that will be required to improve the quality and co-ordination of healthcare and slow the growth of spending (Rittenhouse et al.). One example is the healthcare reform in the United States (Obamacare) where insurance reforms are in main focus.

Reclaiming and redefining the Fundamentals of Care

Nurses working in primary care and district nurses in particular have always made a considerable contribution to the healthcare of older people with chronic conditions (Lupari et al.). During the last decade, we have seen increased examples of this, such as the growth of integrated care services and nurse involvement in general practise-based chronic disease management programmes.

In *Reclaiming and redefining the Fundamentals of Care*, an international group of researchers and clinicians (Kitson et al) aim to provide a framework to guide and shape the on-going debate regarding how to integrate the fundamentals of care into the patient-centred care agenda in acute hospital settings. The framework comprises three core dimensions: statements about the nature of the relationship between the nurse and the patient within the care encounter; the way the nurse and the patient negotiate and integrate the actual

meeting of the fundamentals of care; and the system requirements that are needed to support the forming of the relationship and the safe delivery of the fundamentals of care.

Challenges to implement person-centred care

What are the possible obstacles to achieving an adequate, person-centred, organization of care and nursing for older persons?

Challenges to implementation of a patient-centred medical home model include two issues that lie beyond the direct control of the primary care practice, according to Rittenhouse et al. Although the model calls for primary care practices to take responsibility for providing, coordinating, and integrating care across the healthcare field, it provides no direct incentives to other providers to work collaboratively with primary care providers in achieving these goals and optimizing health outcomes.

Evidence suggests that increased investment in primary care can result in financial savings as a result of cost reductions through fewer unnecessary tests and procedures, fewer hospitalizations for conditions that could be treated in outpatient settings and less utilization of emergency departments. The challenge, however, is that most primary care practices do not have financial arrangements that allow them to share in these savings (Rittenhouse et al.).

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Kitson, A., Conroy, T., Kuluski, K., Locock, L. and Lyons, R., 2013, *Reclaiming and redefining the Fundamentals of Care:*

Policy challenges

There are several policy challenges to be met. Despite the large volume of research literature on the issue, critical gaps limit appropriate evidence-based policy and practice development.

The ability and possibility to assert influence

There are several important issues regarding older persons' ability and potential to influence their own care and nursing: What choices do older persons actually have concerning their own care and nursing? What does person-centred care entail for patients who cannot plead their own cause due to dementia or general frailty? How can we ensure that older persons are involved in decisions concerning their own care, if they wish to and are able to.

There is a need to emphasize care that involves patients in their care and that caters for older persons specific prerequisites. A challenge is not only that they may not be able to convey what they want and need. In an emergency situation the personal and practical possibility of making choices can be limited. This makes it even more important to find conditions for patient participation that takes these limitations into account. It is also important to remember that this is as diverse a group as any other age group when it comes to preferences and abilities.

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Technologies for healthy ageing

– Implementation of technical aids in home care and nursing homes

The global demand for health care is rising rapidly. eHealth solutions have the potential to address the pressing needs of governments to reduce costs and increase quality of care as well as meeting consumers rising expectations on quality and availability.

During this workshop a range of technical opportunities and good examples will be presented and discussed; why have they succeeded and what were the preconditions. It is important to discuss both the hard and soft values and see the link between the technical aspects, a good environment, patient privacy and integrity.

The aim during the workshop is to try to facilitate a broad discussion that includes as many aspects of implementation of technical aids in home care and nursing homes as possible. The need to be and stay in the forefront of this technical development will permeate the discussion.

Workshop responsible

Dr Johanna Ulfvarson, Programme Manager Life Science, VINNOVA – the Swedish Innovation Agency,

Karin Eriksson, MSc, VINNOVA – the Swedish Innovation Agency.

The objectives of this workshop

The global demand for healthcare is rising rapidly. eHealth solutions have the potential to address the pressing needs of governments to reduce costs and increase quality of care as well as meeting consumers rising expectations on quality and availability.

During this workshop a range of technical opportunities and good examples will be presented and discussed; why have they succeeded and what were the preconditions. It is important to discuss both the hard and soft values and see the link between the technical aspects, a good environment, patient privacy and integrity. The aim during the workshop is to try to facilitate a broad discussion that includes as many aspects of implementation of technical aids in home care and nursing homes as possible. The need to be and stay in the forefront of this technical development will permeate the discussion.

The demand is rising

The OECD states that the continuing increase in life expectancy represents a remarkable achievement of humankind. The rates of population ageing are now well documented. In 1960, 9 per cent of the OECD population was over 65 years old; by 2010 the proportion had risen to 15 per cent. This trend is expected to continue into the future as life expectancy keeps rising, so that by 2050 the share of the population aged 65 or more is expected to reach 26 per cent of the total OECD population.

In the same way, the group of people over 80 years of age is expected to reach unprecedented levels. This group accounted for only 1 per cent of the OECD population in 1950, but by 2010 it was 4 per cent and it is projected to be 9.4 per cent by 2050. Several of the countries with the highest proportions of 60 plus populations are in Europe.



There are, however, different ways of interpreting what implications these numbers have for societies. Spijker and MacInnes mean that current measures of population ageing are misleading and that the numbers of dependant older people in the United Kingdom and other countries have actually been falling in recent years. The extent, speed and effect of population ageing has been exaggerated because the standard indicator – the old age dependency ratio – does not take account of falling morbidity. When measured using remaining life expectancy, old age dependency turns out to have fallen substantially in the United Kingdom and elsewhere over recent decades and is likely to stabilise in the United Kingdom close to its current level.

Spijker and MacInnes thus argue that we should not assume that population ageing itself will strain health and social care systems, but medical staff will need to stay alert to the changing relation between “old” and “age” as life expectancy continues to increase and the typical onset of senescence and its morbidities is delayed. Spijker and MacInnes still mean that demands for services will rise but be driven by other factors, chiefly progress in medical knowledge and technology, but also the increasing complexity of comorbid age related conditions.

The demands are changing

Regardless of which measures of population ageing is used, it is clear that the demands are changing. An ageing population, an increasing prevalence of life-style diseases, new treatments, drugs and medical technology drive demand and healthcare spending. Consumers are becoming a stronger force and their expectations are changing. Better-educated, increasingly well-informed and increasingly mobile consumers place new demands on healthcare providers. There is an increasing awareness that proactive behaviour, such as exercise and diets, leads to a healthier life. Power is also given to patients as consumers of healthcare.

Vast opportunities

Consumers have access to an information and communication infrastructure that can vastly increase the reach of healthcare services. The prevalence of personal technology, especially “smart” mobile phones, creates opportunities for new ways of delivering healthcare services and for service integration.

The OECD means that there is another side to the ageing debate, which does not see demographic change as a burden on society, but rather an achievement to be celebrated and the path to opening new social and economic opportunities. They mean that a wide variety of sectors can profit from this new “silver economy” – amongst them public services, health, new media, telecommunications and financial services. This suggests that scientist, innovators, and businesses need to think more broadly about the business opportunities and the service sector of an old people’s market and about what this market needs.

The welllderly

In 2009, the World Economic Forum concluded that it is necessary to develop collaborative ways to shape the “silver society”, using an integrated approach to stimulate action on joint solutions. The Forum noted that no single stakeholder can hope to tackle the associated challenges or make the most of the vast opportunities; success will require diverse, and targeted innovative approaches. There is potential to create a “new age of age”, in which growing old is no longer synonymous with declining health, experience is valued as much as youth, the “silver economy” is vibrant, and the “welllderly” are active and valued in society.

There are challenges

One of the greatest challenges in Sweden and most of Europe at the moment is not the development of new technical aids but to get the people who can benefit from these technical advances to be presented with the possibilities or to request them, *i e* user adoption. This is both a question of knowing what help is available but also that the age group as a whole is not accustomed to these new technologies.

This requires that the ranges of technical aids that are available be presented in a way so that the options can be seen and the aids can be compared and an individual package put together. This is not possible today; no agency or elected body has the responsibility for gathering and presenting this information, not in Sweden and not in most parts of Europe.

These developments also pose challenges for the healthcare system, challenges that the stakeholders within the system so far have not risen to. The healthcare system needs to show leadership in innovation and need to phase out old technical solutions and dated work procedures. Traditional healthcare providers need to adapt to changing expectations and increasing competition. Consumer-oriented companies such as mobile phone operators and consumer electronics manufacturers will become part of the market.

There are also challenges to be addressed that are more clearly linked to the implementation of new technical aids in home care and nursing homes; such as patient privacy and integrity, insurance and legal issues.

The Swedish example

With advanced information and communications infrastructure, technology-friendly users and a healthcare system with a strong international reputation, Sweden offers a good environment for eHealth innovation. Consequently, there are a number of Swedish eHealth providers.

However, the organization of the public healthcare system in Sweden leads to fragmented purchasing systems. This is a barrier to growth and makes the development of standardized and scalable offerings difficult. Therefore, few Swedish eHealth providers have been successful internationally – and often such expansion tends to be limited to the Nordic countries.

Barriers that need to be addressed

However, to facilitate the development, introduction and diffusion of information and communication technologies, a big effort is required at various levels states the OECD. In addition to strengthening investment in research and development and encouraging innovations, a range of obstacles needs to be tackled. These include barriers to market-driven innovation; insufficient awareness of market opportunities; lack of innovation-stimulating public policies; unclear business models for industry; and the high cost of technology development and validation.

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Where no reference is made the information presented above is derived from an interview with the workshop leader, Johanna Ulfvarson, Programme Manager Life Science, and Karin Eriksson, MSc, VINNOVA – the Swedish Innovation Agency

According to a recent public consultation by the European Commission the top three barriers to innovation for active and healthy ageing are; the lacking involvement of end-users in the development and use of new innovative solutions, the lack of funding and the unwillingness of public authorities to purchase novel solutions.

Policy challenges

Policy has a crucial role in accelerating innovation for ageing and in determining the future development and demand for new technologies for older people. The OECD states that in addressing the barriers to innovation, there are two broad policy challenges that can be identified which are the key to furthering growth in services for ageing populations. The first challenge is how to create a more dynamic and competitive business environment that encourages service firms to offer new services for the older people and create new employment opportunities. The second challenge is how to encourage effective innovation and technology diffusion policies that can overcome barriers to innovation and technological change in the service sector.

Where do the individuals’ responsibilities meet societies’ responsibilities

The need for individuals to increase their responsibility for their own health has become increasingly clear over the last decade. Society wants individuals to take preventive measures and also to a certain extent monitor their own health. This, however, creates a grey area of responsibility, which sometimes becomes clear first if and when things go wrong. Another question it raises is; how much responsibility can be put on the individual? In regions in Sweden where remote care technologies is being commonly used it is clearly stated that the county council is fully responsible. But these are questions that need to be continuously addressed and discussed.

Anticipating the Special Needs of the 21st Century Silver/ Ageing Economy: From Smart Technologies to Services Innovation, Issues paper for the OECD Workshop, September 12-13 2012

Spijker, J. and MacInnes, J., *Population ageing: the timebomb that isn’t?*, BMJ 2013; 347:f6598

Respecting the elderly's need in medical- and economic evaluations of drugs

Providing effective, safe and cost-effective medical care for the elderly covers several different dimensions. The incentive to develop new medical therapies for the growing elderly population is affected by how the different therapies are evaluated, specifically in regard to deciding on marketing authorization and reimbursement status.

In this workshop, potential obstacles for providing effective, safe, and cost-effective treatments for the elderly in the future will be highlighted. The importance of providing the right incentives for developing drugs for the growing elderly population and of making sure that the elderly's innate conditions are accounted for in the documentation and evaluation of medical treatments will be discussed.

Workshop responsible

Dr Sophie Langenskiöld, senior lecturer at the Department of Public Health and Caring Sciences, Uppsala University,

Dr Eva Arlander, Head of Unit Use of Medical Products, Medical Products Agency,

Aina Törnblom, BSc Pharmacology, Director R&D, LIF – the Research Based Pharmaceutical Industry.



Economic Evaluations of Medical Innovations – different perspectives

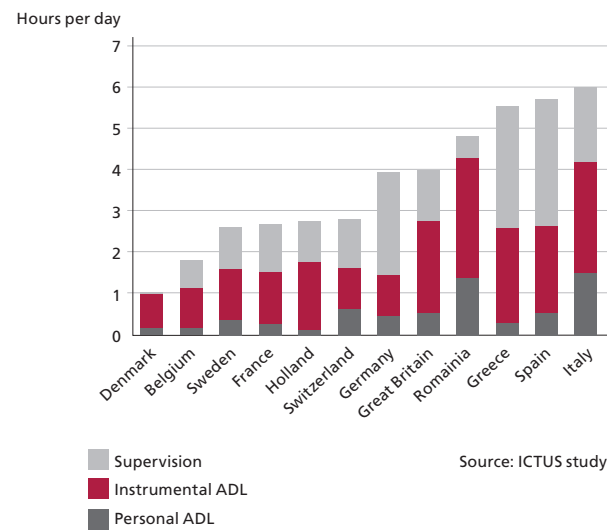
Health Technology Agencies (HTA) around the world have a pivotal role in deciding or recommending reimbursement status for medical therapies based on their cost-effectiveness. Their decisions or recommendations are today so important for market access that passing their approval is considered as the fourth hurdle after passing the safety, efficacy, and quality hurdles.

HTAs differ in terms of the perspective from which they evaluate therapies. There are two predominant perspectives today – the societal perspective and the healthcare perspective. A societal perspective states that “all relevant costs associated with treatment and illness, should be identified, quantified and evaluated”, this includes costs of loss of production and in Sweden also mortality costs, which are defined as total consumption less total production during gained life years. A healthcare perspective has a more limited scope and includes only costs of a specific

“payer”, in this case the publicly funded healthcare system (Johannesson, M. et al in *Why should Economic Evaluations of Medical Innovations Have a Societal Perspective?*).

The Swedish HTA (Dental and Pharmaceutical Benefits Agency) requires the societal perspective to be used, whereas the English HTA (NICE) and the majority of other HTAs emphasize the healthcare perspective, although the societal perspective is mentioned. As the majority of the countries take the healthcare perspective, it is worthwhile considering the impact this perspective has for the incentives to develop drugs for the specific needs of the elderly. It is, for example, possible that the healthcare perspective will mainly reward innovations that focus on reducing mortality over morbidity, since the cost to society of longer life is not considered in evaluations from the healthcare perspective.

Informal care time by country



There is a risk that medical care, which has a great impact on informal care, will never reach the market when the healthcare perspective is chosen, as costs for informal care are not considered. In the case of Alzheimer's disease, for example, the reward to innovators and thus the incentives for innovation has been shown to be strongly dependent on the perspective used in the evaluation (Johannesson, M. et al in *Why should Economic Evaluations of Medical Innovations Have a Societal Perspective?*).

The societal perspective would allow the innovators to charge a higher price for an Alzheimer drug than the healthcare perspective. The societal perspective would justify an annual drug cost of SEK 45 000 whereas the justified cost from the healthcare perspective would only be SEK 18 700 (if the QALY – quality-adjusted life years, gained with the drug would be worth SEK 600 000). However, the societal perspective suffers from drawbacks as well. For instance, it can discriminate against care for elderly as the indirect costs and costs for added life years are included conclude Johannesson, M. et al. On the other hand, this argument implicitly assumes that no transfer of benefits from improved earnings can be translated into improved healthcare for elderly.

There are several perspectives that need to be addressed when assessing a new therapy. If there is a need for home care, it will most likely depend on ones perspective whether this will be called value for money or not. It may be much more likely when taking a societal perspective than when taking a healthcare perspective. Should the cost related to the support by the family, who may stop working, be included or not? It has been argued that when assessing the value of the lost productivity that one should take into account that these losses may not be as high in a situation with unemployment than without unemployment.

As the HTAs today exert an increasing impact on the particular drugs that are developed, we need to pay attention to the consequences that their requested perspectives have on the incentives for drug development.

Elderly in clinical trials – multi-morbidity

Treating the elderly is complicated due to the fact that they often suffer from multiple diseases. Medical treatment of elderly with a high degree of multi-morbidity is in many cases further complicated by the fact that there is less evidence regarding the efficacy and the safety of medical care in this sub-population than in others.

One reason for this is that the randomized controlled trials exclusion criteria have, for example, been found to exclude old age to a high degree (38 per cent), and comorbidities in a majority of cases (81 per cent) reports van Spall, H.G.C. et al in *Eligibility Criteria of Randomized Controlled Trials Published in High-Impact General Medical Journals A systematic Sampling Review*. Clinical trials with multiple study centres and those involving drug interventions are most likely to have extensive exclusion criteria. Such exclusions may impair the generalizability of study results. These findings highlight a need for careful consideration and transparent reporting and justification of exclusion criteria in clinical trials conclude van Spall et al.

There are signs that the elderly population may not match the eligibility criteria of randomized controlled trials evaluating medical care for diseases of the elderly. For example, a fairly recent study demonstrated that among 20 388 Medicare beneficiaries discharged from acute care hospitals in the United States with the principal diagnosis of heart failure, only 13 per cent to 25 per cent met the enrolment criteria of three landmark randomized controlled trials that have influenced the therapies of all patients with congestive heart failure according to Masoudi, F.A. et al in *Most hospitalized older persons do not meet the enrolment criteria for clinical trials in heart failure*.

That elderly patients often are excluded in clinical studies, many times due to co-morbidities, poses a challenge once the treatment is on the market as elderly patients in the real world are different to the studied patients with respect to co-morbidities. Thus, the prescriber faces a situation with unclear efficacy and risk of adverse events. What can be done to overcome the obstacles for study inclusion of elderly patients that resembles the real life patients? How can clinicians, industry, and regulatory bodies contribute?

There are on-going initiatives to evaluate for example new endpoints and stratification factors e.g. frailty to better account for the real-life situation for elderly patients. Will this improve the documentation for new treatments with respect to elderly patients?

How to meet the challenges

We need to adjust the way pivotal trials are conducted or complement these trials with other studies on the elderly in order to truly understand the benefits and risks of treatments for the elderly. Otherwise, we risk prescribing drugs of unclear value to the elderly population at a cost to society as well as the elderly.

This needs to change if we are to be able to provide effective, safe, and cost-effective treatments to the elderly, but how should we do it? Should we focus on changing the regulations regarding the way crucial randomized controlled trials are conducted or complement the shortcomings of the crucial randomized controlled trials with post-authorization efficacy of safety studies? In that case, how can we run post-authorization studies more efficiently? Can we, for example, use our Swedish registries in any way? And which responsibility do we expect the HTAs to take in order to assure good value for money in medical care for the elderly?

Policy challenges

Guidelines on how to assess medical technologies differ between countries and Sweden is the only country where account has to be taken of the added consumption by the elderly when a therapy increases their life expectancy.

Many guidelines may lead to policies, which favour the young and favour the working, because that is more cost-effective to society. Are the guidelines right, wrong or maybe incomplete? More efficacy comes at the cost of less equity. How should this be made explicit? What are the possibilities of using different weights?

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Where no reference is made the information presented above is derived from an interview with Sophie Langenskiöld, senior lecturer at the Department of Public Health and Caring Sciences, Uppsala University.

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Novartis Oncology



Novartis is one of the sponsors of the Uppsala Health Summit. Novartis main focus is on developing innovative treatments to improve the quality of life of patients and to improve the final outcomes of treatment.

Societies today face increasingly ageing populations. This has, among other things, led to the fact that the cancer incidence is higher today and that cancer is becoming more like a chronic disease. The challenge is to keep the ageing population healthier and also to improve quality of life of people with chronic diseases. Important issues then are the accessibility and affordability to innovative treatments and harmonized access to healthcare across the country.

To gain further perspectives and insights on the subject of healthy ageing we have interviewed the general manager of Novartis Oncology in Sweden Dr German Chamorro.

What are the main challenges that the healthcare sector faces today in regards to healthy ageing?

– The main challenge is that the accessibility and the affordability, specifically in cancer treatment, are not harmonized across the country. What I have found after a deep dive into the healthcare system in Sweden is that it is up to the county councils and the hospitals to really define the treatment for the patients. There can be treatments that are reimbursed by TLV (The Dental and Pharmaceutical Benefits Agency) but at the local level patients are not getting that treatment. For different reasons. Either due to a cost-effectiveness perspective or a scientific perspective with local or regional guidelines not promoting that specific treatment. So access to the innovative molecules or the innovative treatments is not harmonized across the country in Sweden. This is the main challenge.

What measures need to be taken?

– This is a subject that is widely discussed by politicians and the government; how to improve harmonized access to healthcare across the country. From our perspective a challenge is that the reimbursement process is centralized, but funding is fragmented on county councils and hospitals. It is not a homogeneous process. Different solutions need to be discussed.

How can we prepare for innovations within the healthcare system?

– Sweden is doing something that is really, really good: horizon scanning. The four largest county councils are looking for what innovative treatments that industries plan to bring to market, so that county councils and hospitals can, earlier in time, plan and budget for their introduction. The process starts 2-3 years before the molecule is available on the market. What they do is that they analyse the incidence, the pathology and the preliminary evidence of the future product so that they in some way can predict how many patients they might treat for the specific disease. From a budgeting perspective it is quite innovative and positive. Sweden is leading this. Looking into the future. It is a well-structured and well-organized system.

Can you see a shift in interest regarding the issue of healthy ageing?

– I can definitely see a larger focus on the elderly population, due to the fact that they are becoming a greater part of the population. The chronic diseases and comorbidities related to this population need to be analysed in a deeper way, from a prevention point of view. But also the treatment perspective, you need to change the approach for this population – earlier the focus was on the fact that patients with cancer live shorter lives and now due to the fact that some forms of cancer become chronic diseases, the impact changes. Patients with cancer live longer and they have a better quality of life. That is the beauty of the development, but there are costs related to this.

Why sponsor an initiative like the Uppsala Health Summit?

– It is an innovative meeting in terms of openly discussing a sensitive issue – we have an ageing population that is becoming more numerous and there are more pathologies that this population is susceptible to. Cancer is one of those. There are many important aspects of healthy ageing being discussed at the meeting. We all have a common interest – better quality of life for the patients.



Dr German Chamorro
General manager
Novartis Oncology Sweden

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