Public health and equity in Sweden

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SWEDISH COUNCIL FOR WORKING LIFE
AND SOCIAL RESEARCH

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Preface

Health inequity is about disparities in health, quality of life and life expectancy between different groups of people. The greatest variation exists between modern welfare states and certain developing countries. The situation in African countries south of the Sahara is especially worrying. As seen from a Swedish perspective, there is also an East/West dimension which has been noted by Denny Vågerö at CHESS.[1] In Russia, life expectancy is falling despite child mortality having been brought under control. Major variations also exist within the European Union, especially between old and new member states.

Ill health as well as indicators of life quality and good health, can be measured in terms of level as well as distribution between groups. Societies with major welfare disparities also carry a large burden of ill health. Living conditions and health also interact with the labour market, employment and economic development. Preventative measures in the area of public health may be as important as labour policy programmes in boosting the availability of labour. Social exclusion can also be linked to social and medical morbidity.

To define the meaning of health is not a simple matter. WHO associates health with physical, spiritual and mental wellbeing and not only with the absence of illness. The Swedish National Institute of Public Health carries out periodic surveys based on a range of medical and social indicators. In 2006, 71 percent of men and 67 percent of women aged between 16 and 84 perceived their health as good or excellent. The perception of good health decreases with age. In the younger group between 16 and 29 years of age,

1 CHESS, Centre for Health Equity Studies at Stockholm University and the Karolinska Institute

85 percent of men and 79 percent of women experienced good health while one person in two did so in the oldest group aged between 65 and 84. In addition, major differences arise from variables such as socioeconomic situation, education and country of birth. Among women born outside Europe in particular, the perception of good health is markedly lower than in other groups.

One cannot discuss health inequity without addressing the conditions for women. It is a paradox that while women report more ill health, they live longer than men. Another aspect is that women's ill health and diseases are not always rated as highly or given as much attention on the medical ranking scale as men's health problems. Interest in medical gender studies has increased in recent years, with health issues being a core area of gender research. In-depth studies of how women and men manage stress and other pressures at work and leisure are also gaining in importance.

In this book, a recurring theme in the interviews with researchers is the social definition or social determinants of ill health. British public health researcher Michael Marmot in his book ”The Status Syndrome” speaks about social gradients or social positioning. This can involve childhood conditions, the parents' social position, the social grammar of housing, or the neighbourhood, place or region where you live. This publication also makes reference to US political scientist Robert Putnam's concept of social capital. Good health also means being able to overcome the difficulties and challenges you face. The proportion of citizens who report increased mental ill health has grown in recent years. The sense of belonging and context and the importance of social communion and networks are being seen as increasingly significant.

However, a strong focus on the social determinants of health must not lead to determinism in public health policy, in other words a sense of impotence and inability to influence people's living conditions and social circumstances. Several of the researchers rather point to the active interplay between welfare, education level and health. Good public health is an important cornerstone for the building of society, not a track at the side of other policy areas such as education, labour market, housing and culture.

FAS hopes that the release of this publication may lead to a better understanding of the research situation with respect to health inequity. We also hope the publication will provide room for reflection about the social determinants of ill health as well as measures that could be implemented at the individual and social level to reduce ill health. Review of the research situation and current statistics do not only show negative trends. Generally speaking, health conditions have improved for our citizens who can look forward to more healthy years after retirement than a few decades ago. One half of Swedish senior citizens aged between 65 and 84 enjoy good or

excellent health. A consistent message in this book is that good health is linked to a good society. General living conditions, education level, having a job and social networks are very important for the development of health in a country. On this premise, the social exclusion of various groups is also a threat to public health. Even if there are major disparities in public health and living conditions between various countries, regions or continents, we hope this publication will provide a good basis for continued dialogue on research needs and measures aimed at improving public health and the quality of life in our countries.

Kenneth Abrahamsson
Programme Director
Research Council for Working Life and Social Research

The health inequity research field

In Sweden, a newborn child has a better chance of surviving to adulthood, remaining healthy and reaching an advanced age if its parents are well educated or have a good social position, than the child of parents who have a compulsory school education or are unemployed. Is this surprising? Not today. But 30 years ago, a report written to the British government stated that this type of inequality no longer existed in Sweden. The report, which was presented by Sir Douglas Black (the Black Report), concluded that Sweden was the first country to succeed in eliminating class and social disparities in the area of health, in contrast to developments in the United Kingdom and other countries. Today we know that this finding unfortunately was quite wrong. The report resulted in a very lively international debate, and research into inequity and health was stimulated in different parts of Europe, as also in Sweden. In addition, the WHO in 1984 adopted the goal of a 25 percent reduction in disparities within as well as between countries by the year 2000.

Swedish research has now shown that social disparities in health exist throughout life, from the fetal period until old age. We now know that there are differences between education groups, occupational categories and income groups. The more privileged have fewer health risks, enjoy better general health and are less prone to experience e.g. cardiovascular disease, diabetes, lung cancer, mental illness and traffic accidents. We can speak of a ”social gradient” (social positioning) which can be observed in almost every health field. The social differentiation, or disparity, in terms of health and the chance of health throughout life has been demonstrated in every country where this has been studied.

The question whether Sweden is more equitable than other countries in terms of health has also been studied in comparative European projects.

Initial answers to the question became controversial and triggered a debate right across Europe. In part the answer depends on how differences are measured, which specific age groups are studied and which aspect of health is in focus. In terms of absolute differences in life expectancy measured in years between labourers and white collar workers, both Sweden and Norway are among the most equitable countries in Europe. However, if relative numbers are used (e.g. the life expectancy quotient between two groups), equity is approximately equal in Western European countries. By contrast, countries in Eastern Europe are considerably more inequitable. In general, disparities in life expectancy are considerably greater than in Western Europe when education groups or social classes are compared. While this is partly a consequence of profound social changes in the East over the last 15 years, new research has shown that health inequities were probably greater in those countries even before the collapse of communism, despite the strong equity rhetoric of their governments.

Balance between social and medical factors

Societal factors also influence more fundamental biological processes such as fetal growth and physical growth after birth, brain development and flexibility, memory and cognitive ability as well as behaviours significant for health and social adjustment. In all these areas, new research has contributed new knowledge. The question why children in different social environments develop so differently in terms of health has generated an entirely new research agenda. Swedish and Nordic research has played a major role in this change.

Public health activities have often been devoted one-sidedly to influencing adult behaviours such as smoking and exercise in order to reduce health risks and eliminate differences between groups. By contrast, the new health related social research has employed a life course perspective. It has been shown that childhood, including the period in utero, has a major effect on health risks later in life. Major diseases such as diabetes, stroke and myocardial infarct are determined partly during the very first period of a person's life, partly later. Conditions early in life also influence future personality, intelligence and behaviours. There are in other words a number of common circumstances early in life that play a major role for social career as well as health. This is one reason for finding such clear social health disparities in all countries. It also explains why it has been so difficult to reduce these disparities. The reproduction of social disparities in health from generation to generation even in the most advanced welfare states has been a hard nut for research to crack. This field is now in the process of exciting innovation and a number of new research projects focus specifically on this issue.

Geographical areas also differ with respect to health. In Sweden the focus has been on exposed residential areas. There is growing research into the question of neighbourhood effects – contextual effects – on health. New methodological development has led to new studies with new results. Swedish studies have shown that living in a neighbourhood with strong social and economic segregation has effects on the risk for myocardial infarct. The question of how the immediate social environment affects a person's health is a major research field which includes studies on stress, e.g. in school or at the supermarket checkout, as well as studies on relative deprivation.[2]

Public health has improved, partly as a result of wise policy measures, but sometimes the health benefits are a secondary effect of a policy with different objectives. Investigating the relationship between national policies in different fields and a country's health development has become an increasingly urgent research question. Economic growth is fundamental, but of less significance in affluent countries than in poor countries. Of greater importance is how the growing economic resources are being used. Public health tends to be worse in countries with major disparities in income and resources. General systems for income transfer, e.g. upon unemployment or retirement, are probably significant for a country's general level of health measured in infant mortality or life expectancy. Commissioned by the World Health Organization, Nordic researchers have initiated pioneering work in this field.

Finally it should be mentioned that global health issues increasingly have found a place in ”health inequity” research. This is very natural, since the most conspicuous health disparities are related to where on earth you were born.

Denny Vågerö is Professor of Medical Sociology and Director of CHESS, the Centre for Health Equity Studies in Stockholm.

2 The basic concept of relative deprivation is that living under poorer conditions is easier when more people share the same deprived situation; but also that what is seen as poorer depends on an individual's social comparisons. Source: CHESS

FACTS

WHO's Definition of health
"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".
WHO, the World Health Organization, was founded in 1948. Under its statutes, WHO's mandate is to achieve the best possible health for all people.

WHO: Commission invests in social reforms for better public health
In March 2008, the World Health Organisation (WHO) will present a report with recommendations on how social reforms can be used to influence public health. Since 2005 the "Commission on Social Determinants of Health" has been gathering knowledge and visiting various countries. The commission is headed by Sir Michael Marmot of the United Kingdom and has 19 other members from around the world. Professor Denny Vågerö, CHESS, is one of them. Already in June 2007 the commission will present an overview of global health problems and inequities in health.
Sweden has been part of a model, both for the WHO and the commission, on how public health issues can be addressed. Sweden has shown the way with respect to working intersectorially with its health objectives.
The commission has about 15 knowledge networks at its disposal which review and analyse literature and experiences. Some of their reports will eventually be available to interested parties.
WHO will then provide support to governments around the world that want to change the way they work towards better public health.
"It is our hope that the conclusions drawn by the Commission on Social Determinants of Health will create a turning point in the work of the WHO", says Denny Vågerö.
The WHO has previously focused on the importance of primary care and disease specific programmes. With the commission's report, the focus will change; investment in social determinants and social change will become an avenue for improving public health in the countries of the world.

Trust is a key to health – good social capital promotes growth

Health inequity causes us to lose a development potential if people suffer unnecessary ill health. If one third of all morbidity is linked to social inequity, a great deal of money is at stake from a sustainability perspective.

There is a need for a new kind of social economy where health is seen as capital for the development of society.

Increasing mental ill health

Public health has improved significantly in Sweden over the last 60 years at the same time as health disparities have increased, says Per-Olof Östergren. The most important explanation is lifestyle changes: people have acted on the new knowledge and changed their way of life.

Looking at health and public health from an equity perspective was not always a given. Per-Olof Östergren:

”In the early 1980s there were many who felt that an individual's social and economic position no longer had any significance for health in the equitable Swedish society. But when we reviewed the material in the public health surveys of the mid 1980s, we found that social inequities in health had increased. We can accept that certain occupations offer higher wages than others, but we find it hard to accept that there are social inequities in health”.

Studies show that education level has a bearing on disparities in health. In the 1980s, for instance, 60 percent of poorly educated pregnant women smoked when they first visited the maternity clinic, while the corresponding figure for well educated women was 30 percent. Twenty years later, 30 percent of poorly educated women were smokers while only 3 percent of well educated women smoked.

Social position in society explains some of the health disparities. Research projects show that not only one's own social position, but also that of one's parents, affects the risk of developing cardiovascular disease.

”However, the emerging problem is now that mental ill health is increasing despite a falling suicide rate”, says Per-Olof Östergren. This can be non-specific mental ill health where you don't feel well, but still do not qualify for a more serious psychiatric diagnosis. Here there is considerable disparity in health. The great divide is between those who have a job, are part of society and integrated in social contexts, and those who are excluded”.

Social capital and trust

A classic question within social medicine is how our health is affected by where we live, and studies show that the neighbourhood is important for the health of its inhabitants. Instituting measures at the neighbourhood level may be a way to promote opportunities for better health among the poorly educated.

Per-Olof Östergren and his colleagues in Lund therefore use the concept of social capital to study the mechanisms in a residential area. A neighbourhood with high social capital functions well; residents trust each other, share fundamental values and participate actively in society.

Which factors contribute to trust and participation?

”It's when we participate in different contexts and different activities – at work, in school or in the neighbourhood”, explains Per-Olof Östergren. “It is through participation itself that trust develops and grows. You get to know other people and can experience fellowship; values become more firmly held and may perhaps lead to democracy and a conscious outlook on life. This process causes social capital to grow and allows society to function smoothly”.

In recent years the concept of social capital has gained attention by its importance for the development of health in a population. There is a connection between lack of trust in other members of a society and the prevalence of mental problems. Sweden is one of a small group of countries where trust is most highly developed. It is also in sharp contrast to developments in the USA where trust appears to be diminishing. Thus it is a major benefit to have the smallest possible social disparities since this promotes confidence among people.

Interest in the concept of social capital arose from a sociological research report published in 1993 by US sociologist Robert Putnam. The report ”Making Democracy Work” deals with factors that promoted social and economic development in Italy in the latter part of the 20th century. He found that northern Italy had experienced more favourable development than the south and was also able to pinpoint major disparities in social

capital between the two parts of the country. Putnam found that northern Italy had a much greater social capital than southern Italy. He believed that social capital means a high level of trust between individuals in society which facilitates all social and economic activities. When you trust each other, business deals can be made on a handshake, social problems can be solved informally, and the need for bureaucracy diminishes.

”Here in Sweden, for instance, we have Knallebygden and Gnosjö where the social capital is high. There the simpler way of doing business doesn’t just favour economic growth, but also benefits society in general. And where the social capital is good, people are more inclined to act on information e.g. about health habits”, explains Per-Olof Östergren.

The city of Helsingborg is now committed to laying the foundation for a more integrated city. Improvements to the external environment are intended to make the area more attractive. In their project blueprint, they point to the aim of placing public health and the individual at the centre of long-term sustainable development. Söder will be developed into a vibrant and flourishing district characterized by diversity and faith in the future.

The intention is to support the development of public health and reduce the incidence of sickness.

Sustainable development

Is socially equitable health possible?

”Yes, in theory, although it is a utopian goal as such. But you always have to strive for socially equitable health, otherwise you lose your direction”, says Per-Olof Östergren.

Do we have good and equitable health in Sweden?

”When one third of ill health is related to social position, it is a matter of opinion whether you consider it good or bad. But it is probably better in Sweden than in many other countries. Health inequity has links to other forms of inequity”.

United Nations surveys classify Sweden as one of the most equitable countries, and we have to assume that this also applies to health.

Health inequity research is now also moving towards broader perspectives. Per-Olof Östergren:

”There has been a major development of ideas in the last 25 years. Initially it was about social justice, but today that is a limited concept. The larger perspective means that we are looking for sustainable development; social justice is no longer enough in itself. We have to be rational and utilize the knowledge we already have.

”We need an overall perspective to understand what is good and what is bad. We must become better at guaranteeing sustainable development. If we don’t change our approach, things can go really badly”.

Per-Olof Östergren is Professor of Social Medicine at Lund University.

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Disparities in health are growing – global inequality puts sustainability at risk

Disparities between countries of the world are not confined to health; in truth, the inequality is enormous. As an example, mean life expectancy is about 80 years in Sweden, and less than 40 years in Botswana. The mean life expectancy of Russian men is almost 20 years shorter than that of Swedish men.

”Today we speak of the importance of sustainable development. Therefore we must realize that it is untenable that some segments of the earth's population face much poorer development than others. The widening chasms create tensions that are destructive in a longer perspective”, says Denny Vågerö, Professor and Director of CHESS, the Centre for Health Equity Studies.

”Today when we speak of disparities between countries, we have to think in terms of inequity and injustice. It is living conditions in combination with the country's own history that creates disparities in health and life expectancy between countries. There are no biological differences that could explain or defend a poor health situation in a country”, explains Denny Vågerö. The good or bad luck of having been born in a certain part of the world also determines a person's health and life expectancy.

”The premises for health vary enormously in different parts of the world. We can look at the situation that prevailed in Sweden about 100 years ago when, in Stockholm, one in five children died before the age of one. Conditions in Stockholm at that time can be compared to the hardship presently found in many African slums. Sweden today has an a infant mortality of 0.3 percent, i.e. 3 children in 1,000 die before the age of one. We have succeeded in correcting a poor health situation in Sweden and this can also be done in Africa and Asia, provided there is good social development”, explains Denny Vågerö.

We have met for a discussion about national differences and health disparities from an international perspective at the offices of CHESS in the old high school at Sveaplan in Stockholm. He has been studying, researching and working with health inequity for over 25 years, more recently focusing specifically on a European and global perspective.

Disparities exist everywhere

How does Sweden's health development look in comparison with other countries?

”In Sweden, social disparities in health are probably smaller than in other countries. As a worker in Sweden, your chances of survival are better than in many other parts of the world. The disparity with other groups is also smaller in absolute terms. The explanation is probably found in the policy pursued by Sweden to eliminate social inequity. However, we now see that the disparity between education groups has been growing in Sweden since 1985 with respect to life expectancy. The situation is improving for all groups, but the well educated are moving ahead considerably faster than the other groups.

”There are social disparities in health and survival in every country. If you compare the poorest countries and the richest, you see the same patterns between social groups – in both cases there is a so-called gradient. The poor have a higher mortality than the rich. All countries, not only the poor, are trailing behind the most successful countries – there is consequently a gradient of change in public health along the entire scale”.

A study by British researcher David Leon compared disparities between countries in Western and Eastern Europe and social disparities within one country – Britain. He found that causes of death which show the greatest class disparities within a country are the same causes of death that show the greatest disparity between countries. Disparities between countries and disparities within a country should therefore have something in common. What similar driving forces are there behind these connections? Disparities between countries e.g. in the incidence of stomach cancer are comparable to disparities in stomach cancer incidence within a country: the patterns are the same. It is created at least in part by disparities in overcrowding (and exposure to a certain bacterial infection) between different groups and countries. In addition, certain disease categories are more sensitive to social change than others, including cardiovascular disease which is considered one of the socially most sensitive.

Russia and Africa

In the post-war period, most countries of the world have made advances with

respect to reducing infant mortality and increasing life expectancy. Average life expectancy rose by 20 years in the period 1950–2000. At the end of World War II, life expectancy was 48 years; today, global life expectancy is 68 years. The trend was broken around 1990 when disparities in health opportunities again started to increase in the world. There are 24 countries in particular where life expectancy has declined. Of these, 16 are found in Sub-Saharan Africa while 6 are former Soviet republics. In addition there is Iraq and North Korea. The cause has been increasing disparities in adult living conditions; the explanation is no longer found in infant mortality.

”There is a dynamic in this situation which presents a danger”, says Denny Vågerö. ”To say that we are affected by the problems is not just a matter of moral scruples, it is also a drive for self-preservation. We are dependent on people in other parts of the world enjoying good health”.

How can this trend be stopped and turned around? Denny Vågerö:

”You cannot get economic development underway in Africa unless you also bring the health problems under control – they are closely related. Hunger, health problems and HIV act in combination; together they constitute a major impediment to growth. It becomes impossible to create resources that can be invested in health.

”Russia has a different type of problem: the positive economic development in Russia has not produced correspondingly favourable health developments. Most of the population has reaped no benefit from the economic advances. Income inequality is increasing enormously and can be compared to the situation in Brazil and USA where income inequality is considered to be excessive”.

Stagnation

In a 1998 study from Taganrog in south Russia, one of Denny Vågerö’s research findings was that 75 percent of the population believed their situation had deteriorated since the fall of the former Soviet system. Almost 2,000 men and women were included in the study which showed a clear link between poverty and heart disease. Individuals who suffered a shortage of vegetables, meat, fish, clothing and shoes were especially prone to poorer health.

Health stagnation in Russia started in 1965 and has persisted for over 40 years. Life expectancy is now shorter than in 1965. In no other part of the world has the development been as negative for so long a period, says Denny Vågerö. As an example, Russian men today have a shorter life expectancy than men in China and Bangladesh.

”The stagnation undoubtedly contributed to the fall of the old Soviet system. If the present regime does not resolve the health issue, the system can become undermined again. Normally a country undergoing economic

development should also see the life expectancy of its population rising. Russia is so far a major exception. The reason may be that economic development is driven by the export industry which means that surpluses and profits stay within certain spheres. Increased health disparity in parallel with increased economic disparity is not sustainable in the long term”.

Russia is a good example of how negative social development is linked to poor health development. There are no genetic reasons; it is social factors and lack of development that have led to these alarming outcomes for health in Russia, believes Denny Vågerö.

Goals difficult to reach

Denny Vågerö believes the UN and WHO should act more forcefully for better development aimed at reducing disparities between countries. WHO’s goal to create health for all in the 21st century is seen by Denny Vågerö as an almost utopian objective. On the other hand, WHO’s vision of giving every child in all countries the same chance of surviving their first two years is a more reasonable goal – but still difficult to achieve.

”It’s good that the international community has objectives, but there is ongoing debate as to whether the goals they have established will actually be reached. With respect to the UN millennium goals, I miss a focus on chronic illnesses such as cardiovascular disease and cancer which are major causes of death world-wide on all continents. The editor of The Lancet has suggested that there should be goals in place to reduce mortality from chronic illnesses by 2 percent annually”.

The world is a system; we are interconnected, says Denny Vågerö. There is no need for disparities to be so wide; in a sense they reflect a global class society – a society for the globally privileged.

”You need democracy and grassroots influence for good health development to take place. Health is linked to social change and must be driven by people who understand why a realignment is necessary. A current problem is the tendency to rely on medical expertise and ministries of health to effect change, when it is in reality a matter of improving social conditions.

”These days our children at school have classmates from around the world. I hope those experiences may contribute to an increased global perspective. The greenhouse effect is also an illustration of how essential it is to collaborate. We can no longer regard the problems as Swedish, European or African. We have to take joint responsibility”, explains Denny Vågerö.

Denny Vågerö is Professor of Medical Sociology and Director of CHESS, the Centre for Health Equity Studies in Stockholm.

Suggested reading:
Lewis, Stephen (2005). Race Against Time. Toronto, ON: House of Anansi Press.
Therborn, I.G. (editor) (2006): Inequalities of the World. Pp 61–92, Verso: London.
United Nations Development Programme, UNDP. Human Development Report 2005: International Cooperation at a Crossroads. www.hdr.undp.org/reports
Denny Vågerö. Do Health Inequalities Persist in the New Global Order?

FACTS

What is CHESS?
CHESS, the Centre for Health Equity Studies in Stockholm, is operated jointly by Stockholm University and the Karolinska Institute. CHESS is involved primarily with basic research concerning society, inequity and health – do all children in Sweden, Europe and the world have the same chance of good health when they are born? If not, what are the reasons?
CHESS joins epidemiologists, public health scientists, demographers, psychologists and sociologists in shared research projects. The centre works with guest researchers from other countries and is part of Nordic, European and global networks devoted to research issues concerning society and health.

www.chess.su.se

Life in mother's tummy contributes to health and social career

A person's class trajectory starts already before birth. The fetal period provides the premise for health throughout a person's lifetime.

”Child mortality and health in childhood, adult life and old age are linked to circumstances that exist already during the period in utero. This is an important period when the child's health is influenced for life”, says Ilona Koupil, Professor at CHESS whose research involves the significance of life in utero.

The fetal environment, family circumstances, place of residence and neighbourhood, social network and general living conditions lay the groundwork for health risks later in life. Cardiovascular disease, hypertension and diabetes are for instance associated with conditions during life in utero and childhood. The degree of vulnerability is established early, like an invisible imprint.

The Uppsala studies offer the possibility of researching life in utero and early childhood. Ilona Koupil is investigating early childhood with an emphasis on life in utero.

”Through the so-called Uppsala studies (see fact box about Unique studies from Uppsala) we have generated significant results”, says Ilona Koupil. ”Among other things we see a link between fetal environment and cardiovascular risk factors such as hypertension, insulin resistance, diabetes, obesity and other metabolic problems”.

Following are some of the findings from the Uppsala studies.

- There is a link between birth weight and blood pressure in adulthood.
- The combination of low birth weight and being tall or obese in adulthood leads to hypertension in men.
- Poor growth in utero and obesity in adulthood may contribute to insulin resistance.

- Birth weight and intrauterine growth show a life-long correlation with mortality.
- Slow intrauterine growth contributes to the development of hypertension, diabetes and heart disease later in life.
- Birth weight is linked to cancer in adulthood.
- Poor fetal growth is associated with high blood pressure when measured in a doctor's office, compared to measurements during the day at home, at work etc. when the blood pressure is normal
- Premature birth can expose the man or woman to stroke in adulthood.
- The mother's pelvic measurements have an effect on birth weight and subsequent circulatory disease.

Family structure

”The Uppsala studies give us an opportunity to examine health and social career and their links both to the intrauterine environment and to early social conditions”, says Ilona Koupil. ”We already know that low socioeconomic status and poverty in childhood can be linked to a higher risk of mortality later in life”.

It is not only traditional social factors that are important for health and social career, but also conditions that vary within social classes, such as family structure. Studies show that children who are born late into a group of siblings tend to suffer negative effects of this ranking, both in terms of survival and social career. It has likewise been found that men who were born out of wedlock are at increased risk of death from heart disease later in life.

”An important question is what significance early social and biological conditions have for inequality in life”, says Ilona Koupil. Birth weight is a marker of the social environment into which a child is born. The Uppsala study shows, for instance, that children of unskilled labourers were both lighter and less chubby than the children of farmers and senior white collar workers in the early 20th century.

There is ongoing debate among researchers concerning the influence of life in utero compared to that of the social environment. Baker, one of the researchers, believes the intrauterine environment plays a deciding role for social disparities in mortality among adults and suggests that inequality is determined early in life. Differences in social environment between mothers result in different intrauterine environments. Influences later in life are therefore of secondary importance for future health.

Here the Uppsala material has shown that social disparities in mortality among adult men and women are influenced somewhat, but not very profoundly, by the intrauterine environment.

Targeted measures

Ilona Koupil believes that further investigation of social causes and associations is essential.

”The intrauterine environment is for instance linked to blood pressure later in life within every socioeconomic group. We need to study which social conditions are involved, since there is a strong correlation between the mother's social conditions during pregnancy and the birth weight of the child.

”It is important to investigate social differences and birth weight in the former Communist countries of Eastern Europe which are now undergoing profound social changes. Our hypothesis is that social disparities in birth weight establish both the foundation and continuation of social disparities in childhood and later in life. An increasing disparity in birth weight between social groups in Eastern Europe will have serious consequences for the children, not only when they themselves grow up, but also for their future children.

”In Sweden, the average birth weight is one of the highest in Europe – about 3.5 kg for girls and about 3.6 kg for boys in single pregnancies”, says Ilona Koupil. ”Birth weight hasn't really changed much over time; in Sweden it's a matter of 80–100 grams over the last 100 years. The disparity in birth weight between different populations can also be explained in part by genetic differences”.

Establishing scientific evidence and methods that convince people of the importance of investing in strategies and attitudes that promote social and health related development is a driving force for Ilona Koupil in her research.

”Public health must continue to work with traditional risk factors in adult life, even though we are now trying to identify risk factors early in life. It is likely that preventative measures targeted to individuals who acquired greater vulnerability to cardiovascular disease early in life could achieve excellent results. More knowledge about early biological and social conditions that cause increased vulnerability to cardiovascular and other diseases can create possibilities for more vigorous preventative measures and treatment.

”But we have to become aware that life in utero is a deciding period in the life of an individual”, says Ilona Koupil. ”It is important to prepare for a pregnancy: sometimes it may be too late when you are already pregnant. Expecting mothers should receive information about how important this period is for the child. This should include information about the importance of not weighing too much or too little; to think about nutrition and vitamins and to stop drinking alcohol and smoking. Being able to give your child a good intrauterine environment is one of the best gifts you can give your child. It is a gift that will stay with a person all her life”.

Ilona Koupil is Professor specializing in paediatrics and epidemiology and a researcher at CHESS, the Centre for Health Equity Studies in Stockholm.

Suggested reading:

Barker, DJP (1994). *Mothers, Babies, and Disease in Later Life*. London: BMJ Publishing Group.
Gluckman, P D; Hanson, M A. *Living with the Past: Evolution, Development and Patterns of Disease*. Science 2004;305:1733–6.
Koupil, Ilona (2007). *The Uppsala Studies on Developmental Origins of Health and Disease.* Journal of Internal Medicine: 2007;261(5):426-36, www.blackwell-synergy.com/toc/jim/261/5.
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FACTS

Uppsala studies show how health is inherited for generations

There are social disparities in birth outcomes, health and mortality risks in every new generation, even in our modern welfare society. Why are these differences recreated despite radical improvement in public health during the 20th century?
Several researchers are trying to find answers to this question through the unique material contained in the so-called Uppsala studies. Data covering five generations is available for research.

1. Uppsala Cohort Study – UBCoS

The Uppsala Cohort Study, UBCoS, was created over ten years ago as a collaborative project between Uppsala University, Stockholm University and the London School of Hygiene and Tropical Medicine. A register contains data on 14,193 live births at the Akademiska Hospital in Uppsala between 1915–1929.

2. Uppsala Birth Cohort Multigeneration Study – UBCoS Multigen

Today a multigeneration study, the Uppsala Birth Cohort Multigeneration Study – UBCoS Multigen – comprising over 100,000 individuals, is used by Swedish and foreign researchers from various disciplines, i.e. branches of science. Professor Ilona Koupil, CHESS, has chief responsibility for the UBCoSMultigen study.

3. Family and health

Family and health, the third study, was started in the late 1990s. Over 600 families resident in Uppsala with at least two children participate in the study. Purpose is to examine how genetic and early life factors influence blood pressure and cardiovascular disease.

FACTS

Network

Early Childhood Development – early childhood

Early childhood is an important period which is linked to social determinants of health. The "Early Childhood Development" network works for WHO's "Commission on Social Determinants of Health" and is charged with contributing specific knowledge on the initial period of a child's life. Early childhood from life in utero to eight years of age is the most important period for a child.

Read more: http://www.earlylearning.ubc.ca/WHO/

Above all, the time before starting school is critical in many ways. That is when children lay the groundwork for their ability to deal with the world. A specific window is open for life-determining development, e.g. in language, cognitive skills, coping strategies and social abilities. To succeed in life, children need stimulation; if they miss this opportunity, it is more difficult to compensate later in life. Parents want to give their children the best possible start in life, but they need support from all levels of society.

The "Early Childhood Development" network is now preparing proposals for policies and interventions to promote development in early childhood. The aim is to contribute to improving child health and social careers today and in the future, and reduce disparities between social groups.

Mental ill health increasing among the young

No question, things have improved in Sweden, the welfare state has evolved. Sweden is almost the world leader in a social equity which also provides equity in health. But – there is one group in our society which bears the brunt of the deficiencies:

”Much remains to be done for our young people. Here development has been at a standstill for decades. If nothing is done, our positive development could stagnate”.

Sven Bremberg, Associate Professor and specialist in paediatric and adolescent care at FHI, the National Institute of Public Health, sees young people as a risk group today. He also notes that mental ill health has become increasingly prevalent among the young. Mental problems have doubled or tripled in just a couple of decades.

When we meet just before Christmas to discuss health conditions among children and young people at the offices of the National Institute of Public Health in Stockholm, the place is in a state of decampment. FHI is on its way to Östersund in a decentralization move. We find a spot among empty bookshelves and moving boxes where we can talk, and Sven Bremberg reports on current health conditions for younger people in our society. He has lots of experience. For over 35 years he has been working with public health in a paediatric and adolescent perspective where the focus has been on social disparities.

”To a great extent our health is determined by social factors, and it is in childhood and adolescence that the foundation for adult health is laid.

”At FHI we see that 20–40 percent of children’s health is explained by their social background. This means that if all children enjoyed the same conditions as those who are most privileged, illness and mortality in adolescence would fall by 20–40 percent. And even in adult years there is a

20–40 percent disparity in health and mortality which is explained by social position which in turn is determined by conditions during adolescence”.

Sven Bremberg realised early on that the way in which health could be profoundly influenced – within public health – was through preventative measures.

”It is possible to implement preventative measures aimed at the young. It’s reasonable to assume that a good society will offer a context that gives children and young people an approximately equal start in life. An important question is therefore how public systems and volunteer organisations are designed in order to reduce disparities in conditions for growing up. Today there is scientific knowledge about how to prevent ill health which municipalities and county councils can avail themselves of”.

Worsening health among the young

According to WHO calculations, mental ill health is the second largest health problem in high income countries such as Sweden. In a few years it is expected to become the leading public health problem; a position now held by cardiovascular disease.

Generally speaking, living conditions for young people in Sweden have remained stable or improved over the past 20 years. Sweden is one of the countries with the lowest proportion of poor children, and welfare systems for children and young people are among the most advanced. Sven Bremberg was involved in the government investigation *Ungdomar, stress och psykisk ohälsa [Young people, stress and mental ill health]*, SOU 2006:77.

”Mental ill health is a general trend in society, but it shows up most clearly among young people”, explains Sven Bremberg. ”It applies especially to the 16–24 year age group. The findings are based on Swedish and international studies. In addition we have interviewed 700 young people aged 13–24 years”.

The investigation notes that mental ill health among young people has increased also in other high income countries. This increase is seen as a trend which started after the end of World War II. The increase has furthermore been faster in Sweden than in any of the 11 European countries for which comparable data are available. In 2002, the incidence of mental problems among young people was higher in Sweden than in these other countries.

The Swedish paradox

Sven Bremberg points to the paradox that while the Swedish welfare system is one of the best in the world, this is not reflected e.g. in good mental health among the young. What is the explanation?

”The primary reason is that it has become more difficult for young

people to enter the workforce. The big downturn for the young occurred in conjunction with the '90s crisis when over 300,000 jobs for young people were lost. These are jobs that have never come back. If you look at income in the 16–24 age group, you find that it has gone nowhere in the last 30 years. There has been a redistribution from young people to the 50+ age group. It used to be normal in any society that every generation of young people would do better than the preceding generation. That's no longer the case.

”However”, emphasizes Sven Bremberg, “this is not the only explanation. The rise in mental problems can also be linked to the individualisation which is part of modern development. Today offers more life opportunities than before; society is more open than ever. It's up to you to choose how you want to live, with whom you want to live, and what you want to become. Life has become less predictable, but it demands of young people that they can make their own choices. The traditional roles have dissolved and all are expected to carve their own niche in life. There is also a gap between the enticement of the open situation and the ability to handle the new options. Being aware and able to make independent choices – that is a critical ability in the modern society of today”.

The individual at the centre

Individualisation has developed throughout the Western world. The World Value Survey is an international study which monitors the development of human values in different countries. This survey reports that Sweden is the country which places the greatest emphasis on individual self-realization. It also shows that Sweden is a country characterized by secular and rational values, which means that Swedes have great faith in their own ability to make rational decisions. Several studies point to risks in individualistic and secular countries. An example is the suicide rate which was markedly higher among young men in 17 OECD countries that emphasize personal freedom and independence.

Freedom of choice and the belief that almost everything is possible comes at a price for the young of today. Sven Bremberg remembers what it was like when he himself was young and had to decide on his education:

”Then, in the 1960s, universities offered perhaps 100 programmes. Today there are 4,000! Many find it hard to cope with the current wealth of options.

”Mental ill health among the young can also be linked to increasing life expectations that bear no relation to what is actually possible. Inspired by the media they may invest in uncertain careers in order to maximize their self-realization. How many of all young people who choose a media education know, for instance, that only about 3 percent of journalism students find work as a journalist? Many become disappointed, having

invested time and money on their studies, when their dream cannot be realized. Here I believe that the information on education in relation to the labour market is inadequate", says Sven Bremberg.

The primary purpose of school

School is a stress factor. 700 young people in the 13–24 age group were interviewed in the investigation and the emerging picture is quite clear. The Swedish school is the greatest cause of stress and lack of wellbeing, according to those interviewed. In addition, many point to deficiencies among teachers. Comments suggest that they don't seem to know what they are doing. Teachers say one thing in class, but apply a different standard when setting grades.

”Many studies indicate that the development for children and young people has been positive, except where school is concerned", explains Sven Bremberg. ”It is therefore important to focus on the school with respect to measures for improving mental health among children and young people. What we need is a school system that works better than it has done over the last 15 years.

”Today, 28 percent of students leave high school without a diploma. This may be a consequence of the problems in compulsory school where the proportion who complete grade 9 without passing has risen to 10 percent since the present grade system was introduced in 1997".

What is it that's missing; where are the deficiencies?

”School is supposed to prepare you for a good adult life. Its core purpose is to make young people more competent", explains Sven Bremberg. ”In today's borderless society, with its boundless possibilities and opportunities for life, you need competence in a broad sense to cope with a life that makes greater demands than ever. We have made a success of our society. It's good and it's individualised – but you have to know how to handle it. Otherwise you're in trouble.

”Today we talk about the need to develop different skills, such as the skill to manage information, to manage your life – your emotions – using so-called coping strategies3.

”School becomes important, especially for students who come from environments where they do not learn to handle the new openness in society. They become losers if school is not clearer in its mandate".

Simple principles are good

”In health and medical care they use quality systems where they collect data and research in order to improve quality within the field. The investigation proposes that similar quality systems be introduced in schools".
Why is it that some students do well while others do poorly? Sven Bremberg

notes that studies of the school system already exist which clearly show where the differences arise:
”There are primarily two main factors that decide whether a student will do well socially and in terms of health:

- A clear definition of what the children are expected to learn. Tasks must not be too simple; there must be a measure of challenge.
- Young people must receive continuous feedback based on their own progress. There must be interaction between teacher and student, where the student is being seen.

”The principle is simple”, believes Sven Bremberg. It is a matter of receiving appropriate challenges and being seen for whom you are.
”The goals must be clear. Compare to what is required in working life research – control, which is about knowing what you have to do in order to get feedback from the boss. This is not a strange principle; it’s very simple.
”The school where you manage best and which is the ’healthiest’ is one where there are no ambiguities. The Swedish schools have perhaps been a bit too wishy-washy in the ’90s”, he believes.

Changing the systems

Things have got better, but they are not good – that is how you can summarize the situation for young people in Sweden. The rising incidence of mental ill health, especially among the young in Sweden, is paradoxical. Swedish welfare systems for children and young people are among the most advanced in the world. Availability of different resources has not changed over the last 20 years. If mental health problems were linked to inadequacies in the welfare system, mental health among the young would be very good in Sweden. But studies shows the opposite. Lack of jobs for the young and increased individualisation are seen as the foremost explanations for increased mental ill health among the young. Sven Bremberg:

”We must remember that our present systems were designed at a certain time and reflect conditions prevailing at that time. Today, other issues and problems require a different type of solution. Our systems have to change; they can’t look the same once they have been improved. Our premises are different today than 30 years ago”.

If the foundation for health is laid in childhood and adolescence, what will happen to the health of today’s adolescents when they become adults?

”We are at risk of regression in our development. When today’s young people become adults, they may experience more rapid aging; social stratification may be more pronounced and the demand for disability pensions may increase.

”We must make our systems better, not by extracting higher taxes, but

through the use of existing knowledge about the value of preventative measures".

Sven Bremberg is Associate Professor and specialist in paediatric and adolescent social medicine at the National Institute of Public Health.

3 Coping strategy here refers to the way in which an individual addresses, tries to master and adapts to conditions and demands, including both external and the individual's own demands.

Suggested reading:

Bremberg, Sven (2004). Elevhälsans teori och praktik – 2:a upplagan [Theory and practice of student health – 2nd edition, in Swedish only]. Lund: Studentlitteratur.
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Encyclopaedia for children & adolescents www.fhi.se/uppslagsverkbarn

FACTS

Children and young people

- Living conditions for young people have remained unchanged or improved over the last 20 years.
- Among young people aged 16–24 who do not still live at home, the incidence of poverty has doubled between 1982–2003.
- 40 percent of all who live on social welfare are aged 18–29 years.
- Many stress related problems are more common in girls and women than in boys and men.
- In 1989, nine percent of women aged 16–24 had mental symptoms. In 2005 the incidence had tripled and almost 30 percent experienced problems. The gender ratio has not changed in the last 20 years. The total increase in mental problems cannot be explained by gender specific differences.
- More young people are being treated for depression and anxiety. Admissions for girls increased eight-fold between 1980–2003. Hospitalisation of boys for depression and anxiety has also increased.
- The incidence of suicide among young people did not change between 1980–2004. However, suicide is more common among men.
- In the last 20 years, alcohol consumption has increased considerably faster among the young than among adults.

Class differences persist among the elderly in the last phase of life

Sweden has the oldest population in the world, with women being in the majority in the 80+ age group. This is more than five percent of the population.

Ill health among the very oldest is conspicuous and class differences persist. ”It is a myth that all are equal before death”, says Mats Thorslund, Professor and geriatrics researcher at the Karolinska Institute, KI. The inequality remains even if we take longer to end our lives. Just 20 years ago we died of serious diseases; now an increasing number die of old age.

”The elderly continue to grow in number and the very oldest require a great deal of care in their final years. Elder care resources have not increased in line with the expansion of the age group. Today your ill health and needs must meet heavy requirements to qualify for assistance from society. Many older people therefore receive no help – even though they need both nursing and social care”.

Mats Thorslund, researcher at the Centre for Elderly Care Research, KI, notes that Sweden is at an important crossroads with respect to prioritising resources for the provision of dignified elder care.

”Today, nursing and social care of the elderly is in a difficult situation; in 15–20 years the situation will be more critical. How can we prioritise; how can we make the suffering less painful?

”For many years, research was being published showing that the elderly were becoming ever healthier and coping with their own needs. These were findings which the politicians were quick to accept and they therefore felt that nothing special had to be done for the future since the elderly were coping on their own. But this proved to be wishful thinking. The studies had primarily been done on elderly who were still capable of managing life on their own with certain aids. There were few studies that included the very

oldest; those who had reached the threshold beyond which social care and nursing are major, essential needs”.

It was just over 10 years ago that Mats Thorslund and his colleagues were able to publish results from a major study on gender and class disparities in health among the very oldest in society. This report attracted much attention internationally since it showed the need for an entirely different debate around the problems and requirements of the elderly. The research also showed that the very oldest were not becoming healthier: while many were now surviving longer even at an advanced age, they had a major need of nursing care. In addition the Swedish researchers became the first in the world to report class disparities among the very oldest, those over 80 years of age.

”I was asked in a radio interview what I thought the Prime Minister should do about the finding of such major class disparities in health”, remembers Mats Thorslund. ”A partial answer is probably that it can be seen as high marks for a well developed welfare state that even sick and feeble elderly individuals survive ever longer”.

Disparities in mean life expectancy

Mean life expectancy is increasing among women – 82.7 years – but most of all among men – 78.4 years – largely because of a marked drop in mortality among men and the very oldest. However, mean life expectancy is not evenly distributed. The difference may be as much as 5.7 years for men and 5.2 years for women between two residential areas with a different socioeconomic makeup, based on the highest and lowest mean incomes. The study was made in Stockholm County. Similar findings concerning the development of mean life expectancy are found in most countries, with the well educated enjoying higher mean life expectancies than the poorly educated.

Just as mortality varies between classes, so does morbidity. It is all about the possibility of aging optimally. The disparities are based on gender, income, education level, civil status, country of birth, etc.

Despite the age-related rise in ill health, class is a deciding factor even in old age. As much as 15 years of good health may separate those in the highest income group from those in the lowest. This means that the incidence of severe health problems is lower among those aged 80–84 years in the highest income group, than among younger pensioners aged 65–69 years in den lowest income group.

Health also differs between women and men, with women generally having more health problems than men. One study shows that the likelihood of having one or several chronic illnesses is almost twice as high for women aged 85–89 years, as for men in the same age group.

Coping with life

”Why don’t the women die?” Mats Thorslund poses a rhetorical question as he reflects on the findings of his own elder research and that of others.

”Although the women live longer than the men, they also live with more illnesses. Women ought really to die sooner than men, but this is not the case. The oldest women are sicker in every respect, but even in the final stage women seem to take longer to die than men”.

Mats Thorslund points to the classical explanation about the different patterns of morbidity among men and women as one of several reasons. Others consider biological differences to be the deciding factor.

”Older studies show that it was more negative for men than women to retire after a life spent working. It may be that men find it harder to cope with life. You simply cannot reach 80 years of age without experiencing your fair share of life’s tribulations. Perhaps women are able to manage and cope with difficulties in a different way than men. It has to do with attitude”.

Mats Thorslund continues:

”Several studies have shown an association in men between having impaired mobility and physical ailments, and how they assess their own health or ill health. In women the association is weaker. One interpretation of these findings could be that when men can no longer move around, cannot be physical, they feel that life is over”.

Third and fourth age

Within elder research, the expression ”third age” is used to denote the period when you live in retirement and health poses no major obstacles to living independently or doing what you want. The ”fourth age” represents the final stage of a person’s life; a time characterised by ill health and by physical and mental impairment. You cannot cope on your own; you become dependent on the help of others.

”What is equitable about aging is that few people nowadays escape the fourth age”, says Mats Thorslund. The first age is growing up; the second age is associated with working for a living; and the third age is retirement – a time of income without work when you manage by yourself. Nearly everyone in Sweden will enjoy the third age for several years, and this is a new phenomenon. In the past, few had the opportunity of living very long as pensioners. The fourth age is the period you want to avoid: few are likely to look forward to being frail and entirely or partially dependent on others for managing elementary chores.

”Data point to a class perspective in the fourth age. Former white collar workers and entrepreneurs appear to enter the fourth age later and not remain there as long as former labourers”.

What will happen in 2020?

The good news is that survival time for serious illnesses has increased throughout the social spectrum”, notes Mats Thorslund. ”This is an indication of an advanced healthcare system and welfare state. The bad news is that the strain on society most probably will increase as the age group continues to grow and an increasing number of people will spend ever longer in the fourth age”.

Mats Torslund’s path to elder research has taken him through working with the economics of the healthcare systems:

”When I started to study health economics, it was remarkable how large the costs were for the elderly. I also found that major elements of management and planning had not been thought through for this group.

”When it comes to the final stage of life, or the fourth age, when people become more frail and need more medical and social care, costs also rise dramatically. It is estimated that costs for the last three years of life make up almost one quarter of the total cost of health and medical care”.

The balance between elderly and those of working age will generally remain unchanged until 2020, explains Mats Thorslund. At that time those born in the 1940s, who represent a large generation, will reach their eighties. Continuing to postpone mortality without preventing morbidity will place a major support burden on the working population.

”Today we have more than twice as many 80 year-olds as in the 1970s. Then there were 225,000. Today we have half a million, but a smaller number of older individuals now receive social care than in days gone by”.

He continues:

”To understand the consequences of the burgeoning number of older citizens, we have to look back in time. In the 1970s there were 20 persons of working age for every person aged 80 years or older. Now, in 2007, there are 11 persons for everyone aged 80 or older. According to prognoses made by SCB, Statistics Sweden, we will be down to 7 persons by 2040. We must also remember that it was in the 1970s, at the peak of the welfare state, that we formulated our requirements for desirable social care for the elderly. Since then the number of very old has risen in the population while resources have failed to increase to a corresponding extent”.

Sweden was also one of the first countries in the world to see the type of demographic development (demographics: changes and conditions in the population) where the number of elderly is growing while the number of children born is declining. Mats Thorslund:

”From an international perspective, we have handled this development fairly successfully in Sweden. This demographic development is now approaching in Japan, a country that has never had a system of social care for the elderly. In Japan the family has to take responsibility for the elderly.

Italy is another country where the number of elderly is growing while fewer children are being born. The key question becomes – whose earnings will pay for pension payments? Italy and Germany have the type of pension system that Sweden used to have, but they will find it hard to keep their promises to future pensioners. The system cannot cope with the development of more pensioners”.

The right retirement age

Public pensions were introduced in Sweden in 1913 when mean life expectancy was 55 years. If we had the same ratio today between mean life expectancy and retirement age, we would go on pension at age 90.

”As we became healthier, we lowered the retirement age”, observes Mats Thorslund. ”In 1977 we allowed ourselves to lower the retirement age from 67 years to 65. If we were to take the 1977 ratio between life expectancy and retirement age and extrapolate it to the current situation, we would retire at age 70. This development has taken place in just 30 years. Pension systems are starting to get expensive”.

Mats Thorslund notes that in the current public debate about social care for the elderly, many politicians cling to the old objectives created in the 1970s, although reality looks very different today. One example of the changing reality is that many of those who entered nursing homes in the 1980s would not even qualify for sheltered housing today.

”There is a greater gap between needs and resources, but also between political goals and reality. This does not promote faith in the welfare society, but may contribute to contempt for politicians”.

Tougher prioritizations

What do prioritizations look like today in social care for the elderly?

”The inequity of the 1980s is gone”, explains Mats Thorslund, ”when men and the higher social classes were being prioritized. There were clear gender and class inequities. Elderly women and working class individuals had to show a higher degree of frailty to receive social care from the municipality. Those class inequities have generally disappeared today. While prioritizations are tougher and based on actual needs, access to social care for the elderly has become more difficult for everyone.

”It is also clear that old persons living alone are being prioritized today. Spouses have difficulty obtaining home service, even if both are frail. Primarily it is elderly women living alone who have to be prioritized; the men have passed away”.

What we need today is a debate based more on knowledge about the situation for the elderly, emphasizes Mats Thorslund. Finding out facts rather

than basing ourselves on wishful thinking. Everyone would like things to be as we formulated them in our 1970s vision when the welfare state was at its peak and we believed that children should not have to take care of their aged parents. It was in the 1950s that children's legal responsibility to provide for their parents' old age was abolished. In Germany, children are still obliged to take care of their aged parents and if they cannot care for them personally, they have to co-finance the care of their elderly parents.

The 2002 report *Äldres behov [Needs of the Elderly]* from the Centre for Elderly Care Research states as follows:

"The current development where we work ever fewer years while simultaneously expecting to live well as old-age pensioners for an increasing number of years, is hardly sustainable. Although every new cohort of pensioners (cohort: statistical sample of individuals who are being studied over time) has been better off than the one dying off, this situation cannot continue for ever".

Mats Thorslund concludes our discussion:

"My feeling is that Sweden, as one of the best educated countries in the world, should be able to have an enlightened debate about what social care for the elderly should look like in the future. There is excellent research which can guide us towards new visions that are based on today's reality".

Mats Thorslund is Professor of Social Gerontology at the Karolinska Institute, KI, and researcher at the Centre for Elderly Care Research.

Suggested reading:

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Sick or healthy because of where you live

How is your health affected by where you live?

International research shows a potential link between where you live and the risk of falling ill.

Maria Kölegård Stjärne and Johan Fritzell are two researchers at CHESS who have taken an interest in so-called neighbourhood effects.

For over 10 years the significance of the residential area or neighbourhood for health and the risk of illness has been a high-profile field in international public health research. The issues are numerous, answers varied, and there are many different views regarding cause and effect among the researchers. Aspects discussed in connection with neighbourhood effects include material resources, social capital and cohesion, segregation and income distribution.

In her doctoral dissertation *A matter of context* Maria Kölegård Stjärne, epidemiologist at CHESS, has shown that the character of a neighbourhood is of some importance for the risk of sustaining a myocardial infarct. Living in a socially exposed neighbourhood increases the risk of falling ill. In her study, Maria Kölegård Stjärne used SHEEP, the Stockholm myocardial infarct programme, to investigate Stockholm residents who were between 45 and 70 years of age when they sustained their first myocardial infarct in the period 1992–1994. The neighbourhood distribution was based on so-called statistical base neighbourhoods which are defined on the basis of homogeneous housing. At the time of the study there were 862 base neighbourhoods in Stockholm County, excluding rural areas. By means of address information, individuals were placed in their base neighbourhood which was also their residential area.

Myocardial infarct was chosen as the marker by reason of being the primary cause of death and the greatest single contributor to social inequity in the total burden of illness in Sweden.

”We found that those living in low income neighbourhoods are more prone to developing myocardial infarct than those who live in more affluent neighbourhoods”, says Maria Kölegård Stjärne. ”What created interest was the fact that the increased risk could not be explained by a person’s income, education or occupation or other factors that had previously been shown to influence the risk of myocardial infarct”.

The availability of services, schools, day-care, communications and access to green areas etc. are important elements in the quality of a residential area. Local availability may therefore prove significant for the risk of sustaining a myocardial infarct. Neighbourhoods with well functioning services have often managed to retain a mix of medium and low income earners. A resource rich population attracts a higher quality of services. The start of an exodus from a neighbourhood can also open the door to increased segregation.

”Neighbourhood contagion”

The study shows that women in low income neighbourhoods have an 88 percent higher risk of myocardial infarct than women in high income neighbourhoods. The corresponding figure for men is 52 percent. The neighbourhood effect seemingly applies to everyone, although not with equal force. Findings suggest that low income women are more vulnerable to the effects of a socially exposed neighbourhood.

”Some of our findings also suggest that income disparities in a neighbourhood play a certain role”, says Maria Kölegård Stjärne. ”As an example, men living in a decidedly low income neighbourhood were at greater risk of myocardial infarct than men living in a mixed income neighbourhood. This supports the hypothesis that low income families may benefit from living in neighbourhoods where there is a mix of medium and high income earners.

”But the actual character or context of a neighbourhood also creates habits and behaviours”, says Maria Kölegård Stjärne. ”Even if a person’s income increases, if they remain in their neighbourhood, the residential area can still affect their health. Neighbourhood attitudes and cultural health habits are ’contagious’”.

Spatial dimension

Johan Fritzell, Professor of Sociology at CHESS, has studied the consequences of income distribution and sees neighbourhood effects as potential segregation trends.

”There is a clear spatial dimension of inequality which is linked to a general dimension of inequality”, says Johan Fritzell. ”If we allow inequality

to grow, the segregation processes will also intensify. This development has gone far in many countries where the poor and rich essentially never meet except through crime, burglaries etc.”.

In a research project, Johan Fritzell and Maria Kölegård Stjärne are investigating the ”Health consequences of segregation” – based on the premise of a connection between people’s life opportunities and living conditions and the place where they live. The project aims to study the importance of the neighbourhood for health, health related habits, risk of illness and the risk of dying.

”It is well known that the health of residents varies between neighbourhoods”, says Johan Fritzell. ”The big question is whether the neighbourhood has any effect that goes beyond what affects the individual. The fact that rich and poor live in different locations in itself has an effect on neighbourhood differences”.

Health research has taken an increasing interest in neighbourhood effects and Johan Fritzell has focused on the effect of income disparities on public health.

”A British researcher has suggested that the economic level of a country has significance at the global level. But when it comes to the rich countries of the world, the size of the GNP does not mean that much. What is important in a rich country is how income is distributed. That theory has provided the basis for a research tradition which is directed towards a geographic dimension and is linked to segregation. In the USA, for instance, there are great disparities where the health of the population in certain states is much poorer, both in terms of mean life expectancy and self-assessed health. In Sweden there are studies which provide different answers to the significance of living in an equitable neighbourhood”.

Separating the effects

Johan Fritzell stresses the importance of identifying effects that may influence a neighbourhood. Measures at the neighbourhood level may not be appropriate simply because of the existence of neighbourhood effects. It may be more appropriate to try breaking down various segregation trends that exist in society as a whole. This is when central social policy measures are at least as important to institute as concrete measures in a certain residential area. Neighbourhood effects may involve something entirely different than the purely physical aspects of a place.

Health inequity and neighbourhood effects – what are your thoughts?

”Generally speaking, if you tolerate a high degree of inequality in a society, it most often also acquires a geographic character. A spatial dimension of inequality develops, examples of which can currently be seen in Sweden where certain neighbourhoods become extremely exposed with a

major lack of resources. At the same time it's important to emphasize that there is a major qualitative difference between exposed neighbourhoods in Sweden and those e.g. in Chicago or Paris".

Have disparities increased in Sweden?

"Yes, there are trends over a twenty year period towards increased inequality, both in terms of income and in the segregation process where there is a clear socioeconomic aspect to residential segregation", explains Johan Fritzell.

Redistribute the risks

In the research project "Health consequences of segregation" Johan Fritzell and Maria Kölegård Stjärne will investigate from an overall perspective how socioeconomic disparities in a neighbourhood can lead to ill health and death. They want to link the research tradition investigating income disparity and ill health to segregation and ill health – and determine what patterns exist. Are individuals in socioeconomically exposed neighbourhoods at increased risk of dying? The aim is to study how people's health status is affected by their social environment and identify consequences of segregation that may contribute to public health policy and social policy debates.

Health and equity are complex concepts. How can disparities be managed?

"Although we cannot eliminate disparities in health, we can influence the premise and consequences of measures", says Johan Fritzell. "We cannot redistribute health, but we can redistribute various types of health risks. This may involve lifestyle and income equalization. A society where resources are distributed more equitably than in another society may derive positive health effects".

Johan Fritzell is Professor of Sociology at CHESS, the Centre for Health Equity Studies in Stockholm.
Maria Kölegård Stjärne is an epidemiologist at CHESS.

Suggested reading:

Fritzell, J; Lundberg, O (editors) (2007). Health Inequalities and Welfare Resources: Continuity and Change in Sweden. Bristol: Policy Press.

Kawachi, I; Berkman, L F (2003). Neighborhoods and Health. New York: Oxford University Press.

Kölegård-Stjärne, Maria; Fritzell, Johan; Ponce de Leon, A; Hallqvist, J (2006). Neighborhood Socioeconomic Context, Individual Income and Myocardial Infarction, Epidemiology, 17(1), 14–23.

Stress in women – a neglected field

Ill health and imbalance leaves traces in the form of significant class and gender inequities. Stress research shows that mental experiences are more important for physical health than previously believed.

”The social and economic environment appears to get under your skin and express itself in various illnesses and symptoms”, says Ulf Lundberg, Professor of Biological Psychology at CHESS.

Current psychobiological research shows that poor socioeconomic conditions trigger a reaction pattern of significance both for mental and physical ill health. It concerns the way in which different signal systems, such as nerves and hormones, connect our mental life to various functions and organs in our body. In their book *Stressad hjärna, stressad kropp [Stressed brain, stressed body]* about the associations between mental stress and physical ill health, Ulf Lundberg and Görel Wentz from a stress perspective describe the complex links between health and ill health that give rise to class and gender inequities.

Only well educated individuals with good incomes have managed to improve their health over the last ten-year period, explains Ulf Lundberg. An equal number of women and men work for a living, although the women mostly work part-time. Gender role patterns are the same as before: women have the main responsibility for household and children. These unchanged gender roles become significant, e.g. in terms of opportunities for recharging your energy.

”There is research showing clear differences between men and women when it comes to recuperation”, says Ulf Lundberg. ”When men come home from work their stress levels rapidly decline, while the level of stress hormones remains elevated throughout the evening in women in families where there are children.

”There is a connection between gender roles and unpaid work in the home”, says Ulf Lundberg. ”We have studies showing that nothing much has happened to the distribution of responsibilities between men and women in the home. Women still have the main responsibility for getting things done – such as cleaning, laundry and birthday presents. On the other hand, men participate more in household chores than before”.

There is also a stronger link between stress levels at work and stress levels in the evening among women than among men. Women appear ”to bring their job home with them” while men handle the change of milieu between work and home quite differently.

Social status and gender

The different conditions for women and men has been a central focus in Ulf Lundberg's research for 30 years. In practically all health studies he has found the same pattern: conditions are the very worst for low income women while they are best for the most highly paid men. The combination of social status and gender can produce very great disparities in ill health. At every level, differences in income have an effect on health with women in almost every case being one degree worse off than men.

What does it entail for a man or woman to commit to a working career and raise a family? This was a question posed by Ulf Lundberg and his colleagues at the start of a research project.

”We have studied full-time working men and women with the same education and occupation, such as physicians”, explains Ulf Lundberg. ”This allows you to see the fairly major differences in total work burden. In families with 2 or 3 children the women have a significantly greater burden of household chores etc. than the men who are not subject to a similar burden. The difference can be as much as 20 hours per week in extra work for the women, which places many of them in an untenable situation. Many women therefore opt for reduced working hours, but at the expense of poorer career development and a lower income and pension”.

In reality, male physicians often have a wife who works part-time and takes care of the children and household, while female physicians do not correspondingly have a husband who works part-time.

Low ranking in the social hierarchy is one of the greatest health risks. There are studies showing that differences in the level of stress hormones are related to a person's social position. The link between health and socioeconomic status is strong and exists at all levels of society. Even relatively affluent people have poorer health than those who are one notch above. These are invisible effects that leave traces through biological events in the body.

”Even if you adjust for certain factors that we know are associated with

stress, there is a clear social inequity in health between the different levels", explains Ulf Lundberg. "Chronic stress results from not having the same resources as your neighbours, colleagues or people with whom you compare yourself. It's not just a matter of financial options; it's also about the possibility of acting, social resources, being able to get help if you land in a difficult situation – all these things are important for our stress burden".

Stress and pain

"Besides various mental problems, the large group dominating long-term sick leave today is people with muscle pain. In recent years we have seen that stress has a major influence on pain. The problems have not diminished, despite measures having been implemented in the physical environment. On the other hand we know that mental stress affects muscle fibres the same way as physical work. Certain groups of muscle fibres can stay active for long periods when the individual is stressed".

Ulf Lundberg emphasizes that not all stress is harmful. On the contrary, we need to have access to our internal stress system for various activities.

"We now know that stress need not be dangerous. But we must have a balance between catabolic body processes when we mobilise our resources in conjunction with stress, and anabolic processes that are regenerative. Stress is about how the body works, how flexible and dynamic the systems are and how they respond to various forms of strain. In chronic stress, regulation of the systems is disrupted and imbalance occurs.

"Today the lack of rest and recovery may be a greater health problem than the strain to which we are exposed in working life", says Ulf Lundberg. "Sleep and recovery are all-important. Those who sleep well at night can generally cope with a lot during the day without coming to harm".

Ulf Lundberg is Professor of Biological Psychology at CHESS, the Centre for Health Equity Studies in Stockholm.

Suggested reading:

Lundberg, Ulf; Wentz, Görel (2005). Stressad hjärna, stressad kropp. Om sambanden mellan psykisk stress och kroppslig ohälsa [Stressed brain, stressed body. On the connections between mental stress and physical ill health]. Wahlström och Widstrand.

Ill health in women – a challenge for gender medicine

While myocardial infarct has long been considered a man's disease, cardiovascular disease is the leading cause of death in both men and women. Most still believe that the leading cause of death in women is breast cancer. Dying of cardiovascular disease is 10 times more common. Women have been invisible in cardiology; diagnostic tests have not been adapted to women and many studies have included far too few for any conclusions to be drawn. Women report many more adverse effects than men as a result of dosages not been adjusted for women.

The equitable treatment of women and men has become inequitable.

”If aspects of gender medicine existed within healthcare, both men and women would receive better care”, says Karin Schenck-Gustafsson, Professor and Chief Physician at the Karolinska University Hospital.

Why do illnesses affect men and women so differently, asks Karin Schenck-Gustafsson, Director since 2002 of the Centre for Gender Medicine at the Karolinska Institute where some 20 researchers are working to illuminate the gender perspective in all clinical specialities commissioned by, and with funding from, the Stockholm County Council and formerly also from AFA Försäkring and one of the Wallenberg foundations.

What does gender medicine signify? Karin Schenck-Gustafsson:

”That men and women differ genetically, anatomically, physiologically, pathophysiologically (e.g. the heart is smaller and the vessels, including coronary vessels, narrower in women, even after adjusting for bodyweight).

”That men and women experience illness and health in different ways for various reasons such as biology and psychology, socioeconomic and cultural differences including learned role patterns.

”If you compare how illness and health affects men and women, you may learn something about why illnesses arise and how they can be prevented”.

The questions are many and reactions have not always been positive when Karin Schenck-Gustafsson has put the spotlight on the gender imbalance in medical research, diagnoses, treatment and rehabilitation. The absence of women has been and continues to be astounding.

”In the early 1990s I started to ask where the women were to be found in research and textbooks”, explains Karin Schenck-Gustafsson. ”They were not there in sufficient numbers and were sometimes missing entirely in academic studies and drug trials. In addition, most animal experiments were and continue to be made on males of the species. When women were included, the numbers were much too small and not commensurate with the incidence of disease in women. If the statistical basis is incorrect, there can be serious consequences e.g. for the drug industry. In the USA, for instance, the Federal Drug Administration (FDA) which licenses new drugs has requirements and recommendations concerning the respective number of men and women that should be included in a study for a drug to be approved. Germany is the only European country which has now also introduced the same fundamental requirements concerning the representation of women in studies”.

Gender segregated statistics

Karin Schenck-Gustafsson is now working to persuade the Swedish Medical Products Agency to introduce the same requirements and recommendations. She monitors these issues in the National Board of Health and Welfare committee on national guidelines for heart disease. Pharmaceuticals must be possible for everyone to use with consideration given to the correct dosage. A minimum requirement is that published studies should report statistics segregated by gender.

”Women generally develop more adverse effects than men”, says Karin Schenk-Gustafsson whose doctoral dissertation dealt with the metabolism of drugs in the body: women metabolise certain drugs in a different way than men. ”My theory is that women receive excessive doses when we use a standard dosage. It is self-evident that a small lady who is 80 years old and weighs 50 kg should not have the same dose as a man who is 50 years old and weighs over 80 kg”.

Karin Schenck-Gustafsson can offer many examples of the risks and consequences of women not being included in studies.

In Pharmaceutical Specialities in Sweden (FASS), clear information is for instance provided to men about the risk of impotence when using certain heart medications as well as other medications. By contrast, there is very rarely any information for women about the possibility of developing a sexual dysfunction when using certain preparations.

Another example is certain blood thinning medications, so-called thrombocyte inhibitors such as Reopro and Aggrastat, which are dosed according to kidney function and were tested on 400 white males about 50 years of age. They are not suitable for women who receive excessive doses with major bleeding complications as a result.

When the new thrombolytic drugs were introduced in the late 1980s, a woman aged 40 years was admitted to hospital in the USA with myocardial infarct. They wanted to give her the new drug in order to thin her blood, but did not dare because she was menstruating. No-one had formulated the thought that a menstruating woman aged 40 might sustain a myocardial infarct and need blood thinning medication.

One woman in five

There are studies, among them a SIFO survey from 2005, which show that women are unaware that they can suffer myocardial infarcts and that this is the most common cause of death also in women. When symptoms occur, they think they are caused by something else. Women tend to be about 10 years older than men when they sustain their myocardial infarct or stroke. Knowledge and awareness of the onset of cardiovascular disease would reduce a major cause of suffering, believes Karin Schenck-Gustafsson.

”Women in Sweden with myocardial infarct would not have to wait longer for the ambulance than men; it would not have to take them an hour longer to get to hospital – than men. Women with cardiovascular disease would receive the same investigation and treatment. Women with heart failure would not be hospitalised more often than men in a general medical ward instead of a cardiology ward with more sophisticated treatment options. And it would be known within the healthcare system that one woman in five does not have the typical symptoms of myocardial infarct when she develops the disease”.

A centre for gender medicine exists not only in Stockholm; similar centres are found in New York, Berlin and Vienna. But Stockholm was first.

Textbooks have started to appear and Karin Schenck-Gustafsson feels that her demands for a gender perspective are being well received. She believes the cardiovascular field has now been well illuminated, but other medical specialities still remain.

”We must strive for gender segregated statistics in all studies, it is after all very simple. I am thinking of the most recent World Congress of Cardiology in Barcelona where they looked at lots of different studies. Research was still being presented without the respective number of male and female subjects being stated. This has got to change.

”Women and men must be appropriately represented in the studies”, emphasizes Karin Schenck-Gustafsson. ”But the minority must also be

considered, for instance that men represent only 5 percent of subjects included in studies on osteoporosis (brittle bones) because the disease is so uncommon in men. You still need to know how to treat men with this disease".

Karin Schenck-Gustafsson is Professor of Cardiology at the Karolinska Institute and Chief Physician at the Karolinska University Hospital in Stockholm.

Suggested reading:

Legato, Marianne (editor) (2004). *Principles of Gender Specific Medicine.* Elsevier Academic Press.
Schenck-Gustafsson, Karin (editor) (2003). Kvinnohjärtat: Hjärt-kärlsjukdom hos kvinnor *[The female heart: Cardiovascular disease in women, in Swedish only]*. Lund: Studentlitteratur.

FACTS

What are the signs of a myocardial infarct?
Karin Schenck-Gustafsson, heart specialist, offers some advice which could be life saving:
Both men and women can have chest pain in conjunction with a myocardial infarct, this is fundamental. Typically this involves pain in the sternum [breastbone]; a pain which may radiate to the back, jaw and teeth. The pain persists for at least 20 minutes and you are profoundly affected by it.
These symptoms apply to both men and women.
However, one woman in five may have symptoms of a different kind when she develops a myocardial infarct. She may become out of breath or feel so tired that she can barely walk. Some women say it feels like having a "steam roller" inside the chest, but the pain is not of the same type as described above. They feel unwell, are often dizzy, feel nauseous and have other unspecific symptoms.
If you are 25 years of age and develop these symptoms, the cause could for instance be stomach flu. But if you are around 60 years of age and have risk factors for myocardial infarct – smoking, high blood pressure, stress etc. – it could be a myocardial infarct.
Get help! It is better to seek help once too often than once too little. Women have a tendency not to take their symptoms seriously, but it is important to get a proper examination.

Knowledge about public health spurs Swedes towards better lifestyle habits

”I believe public health reporting has put the spotlight on health issues and the importance of improved living conditions. The National Board of Health and Welfare's public health reports, which have appeared for almost 20 years, have contributed to this development”.

This is how Måns Rosén, Adjunct Professor of Epidemiology and Public Health Sciences summarizes his experience of many years' work with public health reporting. People have always been very interested in their own health and that of others. In the past we did not have the statistics or surveys of the state of health that we have today.

Every three or four years the National Board of Health and Welfare has published a *Folkhälsorapport – Public health report* – as commissioned by government. Continuous reporting of the state of health in Sweden started in the 1980s. The reporting is intended to provide a basis for health policy with the aid of national health registers and personal identity numbers. Social development, living conditions and lifestyle habits have a strong impact on health and are therefore related to actual health trends in Sweden. The latest public health report appeared in 2005, the sixth in the series.

How is the report being used?

”We made an evaluation of the 1994 public health report and found that the report had a very high level of credibility, regardless of political views”, explains Måns Rosén. ”The reports are read assiduously by the government, parliament and ministries. But they are also being used in the healthcare system. What pleased me most about the evaluation was that 40 to 50 percent of all those involved with healthcare education were using the report as course literature. At the start of every term, we now notice the current public health report being downloaded. This shows that the reports are broad-based and provide coverage at the national level”.

”How is Sweden feeling?”

Måns Rosén has been involved with public health reporting since the late 1970s when he collaborated with the Västerbotten County Council on regional public health reporting while working on his dissertation in social medicine at Umeå University. Since autumn 2006 he is Director of the Swedish Council on Technology Assessment in Healthcare, SBU. Måns Rosén was previously head of the Centre for Epidemiology at the National Board of Health and Welfare where he was responsible for publication of the public health reports.

”At the Centre for Epidemiology we worked hard to make the statistics available”, says Måns Rosén. ”We wanted every county council and municipality to be able to review the situation in their own community or region. We created the ”Hur mår Sverige?” – ”How is Sweden feeling?” – database which became popular. This allowed you to check the health situation and social conditions from the vantage point of your own municipality in order to prepare local public health reports”. The public health report has primarily used the National Board of Health and Welfare’s own registers, e.g. the cause of death register, records of hospital admissions, i.e. the patient register, the medical birth register and the cancer register. As of 2005 there is also a drug register. Supplementary information e.g. on income, education and those born abroad has been obtained from SCB, Statistics Sweden. Måns Rosén:

”These statistics enabled us to see connections at the individual level between low education and higher mortality from cardiovascular disease. There are major differences between white collar workers and labourers in terms of social inequity. Another type of risk group highlighted by our statistics is ’single parents’ where we introduced a new type of classification. This showed that conditions from the financial and health standpoint are at least as difficult for the category of ‘single parents’ as for labourers. Gunilla Ringbäck, whose doctoral thesis dealt with ‘single parents’, gained a lot of international attention with that study. It was the first of its kind to contain a large amount of factual information about living conditions for that group. I don’t think it had previously been realized how exposed the ’single parent’ category is”.

Longer life expectancy

Måns Rosén is pleased to see that cardiovascular morbidity and mortality has diminished.

”The dramatic improvement is due to changes in our lifestyle habits. We smoke less and eat better and more nutritious food. In addition, the healthcare system has contributed to further improvements through new

medications and surgical techniques. The paradox is that this will create increased healthcare needs in the future. People used to die at 70; now you may live to the age of 90 thanks to new medications and treatments. But you will need care and treatment in the latter part of life.

”Even if this development will be more expensive for society, I regard it as highly positive that people live longer today. Often quality of life has also improved: diabetics and heart patients for instance experience much better health than just 10 to 15 years ago”.

Besides the public health report, the National Board of Health and Welfare also publishes a *Social Report*. The latest, from 2006, is the fourth national report about social conditions. This too is a government assignment and aims to highlight welfare, social problems and risk factors and examine how the Swedish population is being affected. The latest social report notes that social welfare in many respects has undergone a polarisation, with improved conditions for most people. However, 6 to 7 percent of the population has failed to benefit from these improved conditions. Måns Rosén wants to draw attention to a specific so-called risk group – children placed in foster homes or institutions. This applies especially to teenagers with behaviour problems. Institutionalization places them at risk of premature death, crime, psychiatric illness, suicidal behaviour, substance abuse etc.

”I think you can question the care these young people receive in institutions”, says Måns Rosén. ”There are discouraging findings which show that such care may be detrimental to young people. Despite the known risk of harmful effects of group therapy in teenagers with behaviour problems, institutional care in Sweden has not really been subject to evaluation. These young people are a very exposed group in our society, and it is alarming that current measures do not appear to help. Here you need to try new approaches to reduce suffering, illness and mortality”.

Measures

The public health report and the social report, published on an ongoing basis, provide a platform for discussions as well as decision making for those who want to use the material. While Måns Rosén is pleased that the reports are being read by so many, a great deal remains to be done.

”The reporting could be made more efficient. One problem is that we do not always know what measures would be effective. Most support the notion that social inequity in health should be eliminated, but it is not entirely clear what methods we should use to reach this goal”.

The development Måns Rosén would most like to see relates to the need of mapping which measures are effective and yield the best results for the purpose of changing lifestyle habits.

”Here the National Institute of Public Health, FHI, as well as SBU have an important task”, suggests Måns Rosén. ”We should be able to develop and identify good preventative measures and provide recommendations on which methods yield the best results. Although we primarily evaluate medical methods at SBU, we have evaluated methods for smoking cessation as well as physical activity. FHI could do something similar with the more socially orientated preventative measures”.

Smoking is an example where there is knowledge about effective methods but where even better methods should be developed. There are major social disparities – labourers smoke more than white collar workers, and single persons smoke more than those who cohabitate. If they stopped smoking, their health would improve. Many live in an exposed situation both financially and socially where it may be difficult to stop smoking. The question is therefore how we should go about supporting them with a smoking cessation programme. ”Today we don’t know what the most effective measures are”, explains Måns Rosén.

With respect to alcohol, Måns Rosén makes a bold prognosis by assuming that mortality from alcohol related disease will decline until 2024. That is when people born in the 1960s and 1970s, who are seen as leading more healthy lives than many others, will be about 60 years of age. This group represents a counter reaction to the generation of their parents – those born in the 1930s, 1940s and 1950s who are seen as a high risk group in this context. Måns Rosén explains his prognosis by pointing out that the alcohol purchase permit – ”motboken” – was abolished in 1955. Many in the parent generation were young at the time and became exposed to a risk factor when alcohol restrictions were lifted. Excessive alcohol intake at an early age produces effects in the form of increased mortality around age 60. Young people of the 1980s and 1990s who have a high alcohol consumption today risk developing these problems around 2040 – when the consequences of their alcohol consumption become apparent.

The inequity remains

Is there a new health inequity today?

”No, health inequity has always existed; there is no country that is equitable in this field”, says Måns Rosén. ”It is remarkable how stable this picture of inequity is – year after year. Health improves for the majority, but is inequitable between groups. Smoking is an interesting exception from this rule. Here the so-called social gradient was inverted when smoking was introduced in the ’40s and ’50s. It was the well educated who started smoking; the change in smoking habits came about when knowledge of the dangers emerged. At that time the lower social groups started to smoke while the well educated upper classes stopped”.

What is the future outlook for health inequity?
”One trend which I think can become a problem is regional differences”, says Måns Rosén. ”What is going to happen in the sparsely populated areas? Today we see major regional differences in mean life expectancy between municipalities. As an example, there is a seven-year difference in mean life expectancy between those living in Arjeplog, which has the lowest mean life expectancy, and Danderyd where it is highest. There will be problems in northern Sweden due to depopulation. Those with the poorest health will stay behind while women in particular will move to other communities.

”How are you going to manage living in a low density area in a globalised world? There are greater disparities in health between municipalities in Sweden than between Sweden and Azerbaijan. You live longest in affluent communities such as Bollebygd, Danderyd, Lidingö. If you look at counties, you live longest in Halland. The shortest mean life expectancy for men is found in Norrbotten and Värmland; for women it is in Norrbotten, Västernorrland, Gävleborg and Värmland”.

The 2005 public health report is a fat volume of almost 400 pages packed with statistics, information and analyses. Swedes are not alone in their ambitious public health reporting – Denmark, the Netherlands and Britain are countries that also use reporting as a means to eliminate disparities.

”However”, says Måns Rosén, ”we cannot claim that the public health reports have led to better health in Sweden. But they have put the spotlight on issues and increased the level of knowledge about the major role played by social factors and living conditions for individual as well as public health”.

Måns Rosén is Adjunct Professor of Epidemiology and Public Health Sciences and since autumn 2006 Director of SBU, the Swedish Council on Technology Assessment in Healthcare.

Suggested reading:

National Board of Health and Welfare (2005). *Public health report.*
National Board of Health and Welfare (2006). *Social report.*
Read more at www.sos.se/epc – about health and social conditions. Select the statistics you want under the heading: statistikdatabaser.

FACTS

The NEWS network – Nordic experiences show the power of a good example

What influence has the welfare model of the Nordic countries had on public health? In which way can other countries benefit from experiences made in Sweden, Norway, Finland, Denmark and Iceland? These are some of the questions to which a group of researchers are seeking answers in NEWS – The Nordic Experience: Welfare States and Public Health, a project commissioned by Sir Michael Marmot, Chairman of the large WHO Commission on Social Determinants of Health. See fact box at the end of this book.

Sweden and the Nordic countries have a world reputation in terms of income equity and life expectancy. With respect to outcomes such as poverty and income equity, the Nordic countries have achieved good results with the welfare policies pursued. As an example, Sweden has fewer poor children than the USA where 25 percent of children live in poverty. In Sweden this figure is 3 percent.

There are countries that have caught up with Sweden – for instance, French women today live longer than Swedish women. Japan is a remarkable example of a country which has been able to increase life expectancy. Among rich countries, USA shows the poorest development. Infant mortality is about 7 per 1,000 births in the USA; in Sweden it is currently about 2.5 per 1,000 births.

The NEWS group is led by Professors Olle Lundberg and Johan Fritzell at CHESS and has a Nordic reference group linked to the project. A report detailing the experiences of welfare policy in the Nordic countries and how they have influenced public health is due for completion in summer 2007. Partly through the power of a good example, the NEWS group wants to draw attention to existing research and experiences in public health and social policy.

Eleven public health objectives for Sweden's population

Sweden has a national public health policy with eleven target areas. FHI, the Swedish National Institute of Public Health, plays a central role in the coordination of public health efforts where the primary aim is to create social conditions for good health. The public health objectives focus on living conditions, environments, products and lifestyle habits. FHI monitors the work and reports to government on the effects of the policy on public health.

The eleven public health objectives are:

1. Involvement in and influence on society;
2. Economic and social security;
3. Secure and healthy conditions for growing up;
4. Better health in working life;
5. Healthy, safe environments and products;
6. Health and medical care that more actively promotes good health;
7. Effective prevention of the spread of infections;
8. Secure and safe sexuality and good reproductive health;
9. Increases physical activity;
10. Good eating habits and safe foodstuffs;
11. Reduced use of tobacco and alcohol, a drug and doping free society and a reduction in the harmful effects of excessive gambling.

FHI has been working with the public health objectives for four years and Gunnar Ågren, Director General of FHI, while pleased with the ongoing efforts, is also looking for continuous monitoring of public health developments in relation to the social changes being implemented.

”I find it startling that no account is taken of existing evidence and

arguments which show that good health is good for the economic development”, says Gunnar Ågren. ”At the regional level we see that regions with a healthier population have a major competitive advantage over regions where the health is poorer and the incidence of sick leave high. This type of fairly simple links has had a hard time penetrating into the socioeconomic debate, where the economists still enjoy a strong interpretative preference”.

Gunnar Ågren is self-critical when he points out that a good job has been done describing and analysing the problems, while the major issue is what should be done about the public health problems that exist. He believes it would be most effective in the long term to address fundamental structural factors through social and labour market policy in order to reduce inequities in health. Family support to all parents is, for instance, one way to reduce the inequity in child health. Generous conditions for parents of small children who want to stay home from work with their children have made it possible for single mothers to remain in the workforce – something which is uncommon in other countries where they become excluded from the labour market and often have major health problems.

”I am happy that good public health efforts have been initiated at the national, regional and local level; there are many who have become involved”, says Gunnar Ågren. ”But we lack concentration on the large and weighty issues when it comes to public health; our methods of instruction should be better. I feel we are well on our way with respect to alcohol policy, but I think we still have problems communicating the nutrition issues. And when we talk about sick leave and unemployment, the health aspects are given too little attention – this is due to lack of knowledge and methods of instruction.

”And”, notes Gunnar Ågren, ”we have many capable researchers, and their research results need to be published as a contribution to the social debate”.

Gunnar Ågren is Director General of FHI, the National Institute of Public Health

Selection of FAS-evaluations on health related research

- *An evaluation of Swedish Health Economics Research,* (2006) Michael Drummond, Grete Botten, Unto Häkkinen, Kjeld Møller Pedersen
- *Complementary and Alternative Medicine (CAM)*, (2007) Irene Jensen et al.
- *International evaluation of Swedish public health research,* (2004) Finn Kamper-Jørgensen, Sara Arber, Lisa Berkman, Johan Mackenbach, Linda Rosenstock, Juha Teperi
- *International evaluation of Swedish work environment research,* (2006) David Wegman, Alex Burdorf, Paul Oldershaw, Brigitte Schulte-Fortkamp, Eira Viikari-Juntura
- *An Evaluation of Swedish International Migration and Ethnic Relations (IMER) Research 1995-2002,* (2003) Ellie Vasta, David Ley, Peder J. Pedersen, John Solomos
- *Youth Research in Sweden, 1995-2001. An Evaluation Report,* (2003) Jan O. Jonsson, Helena Helve, Lars Wichström

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