Umeå International School of Public Health

Epidemiology and Public Health Sciences

Department of Public Health and Clinical Medicine

Annual Report 2005

International Public Health in Umeå

Umeå International School of Public Health

www.umu.se/phmed/epidemi

Foreword

This Annual Report is the 18th since we were established as an independent university unit for research and training in epidemiology and public health. The report aims to capture the activities during 2005, in terms of quantitative characteristics as well as qualitative descriptions (chapter 1). It provides some historical background information at the same time as it covers descriptions of current research (chapters 2 and 3). The background facts are essential in order to put our work into the different contexts in which we operate. The report has however not the ambition of being totally representative of our overall agenda, but highlights mainstream activities in the division. The research activities are presented along three main problem areas – aetiology, social and interventive public health research. Under these headings, specific projects are described. Due to overlapping and collaborative efforts in the research projects, they may appear more than once in the text. In chapter 4 we present the teaching mandate that is an essential part of our activities, in terms of training in public health and epidemiology from a Swedish, as well as an international perspective. Finally, we outline our advocacy mandate (chapter 5). The year of 2005 contained several important events and steps forward for the division. It was a year full of innovative research efforts, enriching seminars, fruitful visits by guest researchers, PhD defences and teaching challenges.

During 2005 three PhD students defended successfully their theses. Sven Hassler presented a thesis with the title "The health conditions in the Sami population of Sweden 1961-2002". Eliette Valladares' thesis dealt with violence against women during pregnancy; "Partner violence during pregnancy – psychosocial factors and child outcomes in Nicaragua" and Nguyen Xuan Thanh's thesis was about injuries in the Vietnamese society "The injury poverty trap in rural Vietnam". Two new doctoral students were accepted during the year: Emil Löfroth on economical, ethical and epidemiological aspects on distribution of resources in order to prevent cardiovascular diseases and Edward Fottrell on vital event surveillance in demographic surveillance sites.

The Etics project on celiac disease among children was further extended during 2005, which resulted in two new staff members; Fredrik Norström and Anna Myleus. The long-lasting collaboration with the Västerbotten County Council continued and we are now in charge of the VHU database and its maintenance covering health examinations of 95,000 of the Västerbotten population. Through funding from the county council Alexander Kudryavstev from Russia was awarded the 2005 PhD scholarship.

Our international collaborations continued. They are vital parts of our teaching as well as research environment. The globalisation and the modernisation processes in the world are important to highlight as they may cause substantial inequalities and inequities in health, not only on an individual level but also on the structural level. During the fall of 2005 two guest researchers visited the division through a grant from FAS, the Swedish Council for Working Life and Social Research; Kathy Kahn and Steve Tollman from University of Witwatersrand in Johannesburg, South Africa. Their four months stay at the division was a fruitful exchange of innovative research ideas as well as social amusement

Due to the fact that the major part of our research is externally financed we always spend a lot of time writing research proposals. This was true also for 2005. During the year we were successful and received several large research grants from external funding agencies. New and extended research collaborations within Umeå University were established around long-term research plans in three different fields; ageing and demography, physical activity and finally gender and health. These new collaborative efforts also resulted in three new research proposals.

Finally, we ended the year by celebrating the Swedish traditional Lucia day in December in a slightly non-traditional manner!

Stig Wall, Head of Division
Ann Öhman, Deputy Head of Division

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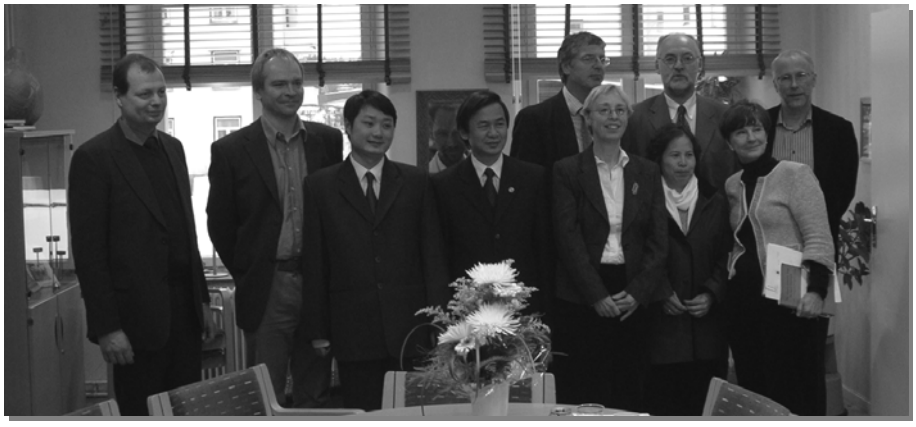
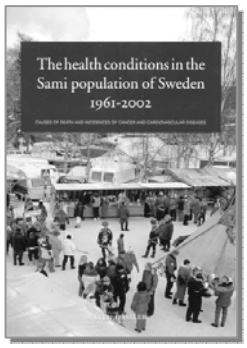


Sven Hassler



The health conditions in the Sami population of Sweden 1961-2002

Thesis defended: May 2005
Opponent: Peter Bjerregaard, National Institute of Public Health, Copenhagen, Denmark
Supervisors: Per Sjölander and Urban Janlert

The Sami people are the Natives of northern Scandinavia. The knowledge of the health and living conditions of the Swedish Sami is extremely limited which is in contrast to the large amount of detailed information on health and socioeconomic issues that is available for other circumpolar Natives. The encounter with the western society and the acculturation process has for many native populations had serious health consequences, causing a dramatic increase of lifestyle related diseases such as cancer, diabetes, stroke, obesity and hypertension as well as a dramatic increase of suicide and drug abuse.

The overall objective of this thesis was to investigate the health conditions of the Sami population of Sweden using causes of death and incidences of cancer and cardiovascular diseases (CVD) as health indicators, and to evaluate their possible association with acculturative factors such as assimilation, integration, separation and marginalization.

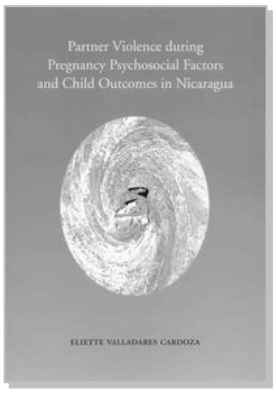
A Sami population was identified containing a total of 41 721 individuals. Specific cohorts were selected from this population for the different studies. A four times as large demographically matched non-Sami control population was used for comparisons. A study of causes of death, 1961-2000, showed small differences in overall mortality and life expectancy between the Sami and the non-Sami. However, Sami men showed significantly lower mortality risks for cancers but higher for external cause of injury and Sami women higher risks for diseases of the circulatory system (CVD) and of the respiratory system. An increased risk of dying from subarachnoid haemorrhage (SAH) was observed among both Sami men and women.

The increased risk of dying from accidents among male reindeer herders is suggested to be caused by the increased socioeconomic pressure and the extensive use of terrain vehicles. It is concluded that commercial reindeer management is one of the most dangerous occupations in Sweden. In a study of the cancer risk among the reindeer herding Sami between 1961-1997, an overall lower risk to develop cancers, particularly prostate and malignant lymphoma was observed among the reindeer herding Sami. The risk for stomach cancer was significantly higher in relation to their non-Sami neighbours.

The Sami and the non-Sami had similar risk factor-patterns for CVD. The main differences were related to working conditions and lifestyle factors of the reindeer herding Sami - the women showed a more unfavourable risk factor pattern than the men. Higher incidences of stroke were observed among Sami men and women compared to their non-Sami neighbours while the mortality rates of stroke were similar. The mortality ratio of AMI was increased for Sami women in spite of similar incidence ratios. A higher risk of SAH was observed among all groups of Sami. According to traditional socioeconomic risk factors, the differences in the levels of income and education observed between the Sami and the non-Sami, were poorely associated with the disparities of CVD.

As has been shown, only minor differences in the health indicators were found between the Sami and their non-Sami neighbours. This is in clear contrast to several other native populations for which the health situation is largely unfavourable in comparison with that of the general population. The observed differences between the Sami and the non-Sami probably reflect differences in lifestyle, psychosocial and genetic factors. The relation between these factors and the acculturation process is dicussed, and it is suggested that separation or segregation of the reindeer herding Sami and the assimilation of the other Sami have influenced the health condition of the Sami, but with the largest impact probably prior to 1961 and the earliest start of follow-up for the studies in this thesis. Thus, the similarities in health between the Sami and the non-Sami 1961-2002, are probably a result of centuries of close interaction that has caused similarities in culture, attitudes and lifestyle, as well as equal accessibility to the health care services and the social security systems.

Eliette Valladares



Partner violence during pregnancy in Nicaragua, psychosocial factors and child outcome

Thesis defended: 14 September 2005
Opponent: Professor Berit Schei, Inst for samfunnsmedisinske fag, Norges teknisk-naturvetenskaplige universitet, Trondheim, Norway
Supervisors: Ulf Högberg and Lars Dahlgren

The objectives of the thesis was to explore partner violence during pregnancy in Nicaragua – its prevalence and characteristics, how women perceive, understand and cope with it, its association with specific child outcomes such as low birth weight (LBW), small for gestational age (SGA) and preterm birth, and possible pathways. A cross-sectional community-based study was conducted with 478 pregnant women and for a sub-sample of 147 salivary cortisol was measured. A case-referent hospital-based study was organized including 303 mothers immediately after delivery. In-depth interviews were conducted with women survivors to increase understanding of partner violence during pregnancy.

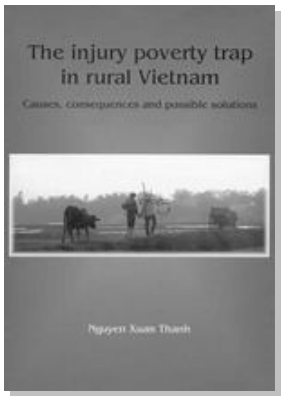
The prevalence of emotional, physical and sexual partner abuse during pregnancy was 32.4%, 13.4% and 6.7% respectively. Seventeen percent of the victims suffered all three types of violence and in two thirds the abuse was severe and repeated. Half of the abused women had experienced punches and kicks directed to the abdomen; however, only 14% had sought health care and very few had disclosed the abuse or contacted police or authorities. Adolescent mothers, unwanted pregnancy and late registration for antenatal care or no check-ups were more likely among victims. The access to social resources facilitated the women's ability to cope with the abuse, but the pregnancy itself was a barrier to receiving support from family, friends or society. The ability to confront abuse was determined by a complex interplay of factors such as economic independence, severity of abuse, access to social resources, implications for important others (i.e. children), socioeconomic group and a personal ability to cope with social norms.

Low social resources, high levels of emotional distress and attempted suicide were associated with violence during pregnancy. Abuse during pregnancy was also found as an independent risk factor for LBW. Sixteen percent of LBW was attributed to physical abuse by a partner during pregnancy. A significant association between abuse during the index pregnancy and SGA was found.

Partner violence during the pregnancy, low social resources and emotional distress were associated with higher levels of salivary cortisol. Pregnant women with high cortisol values were significantly more likely to give birth to SGA babies. A substantial decrease of birthweight, 142 grams, was estimated to be associated with increases in cortisol due to violence exposure.

Partner violence during pregnancy is a serious social problem that impacts the rights, health and wellbeing of both the woman and her unborn child. The studies call for prioritization of intervention programmes for prevention and detection of violence, treatment and rehabilitation of the victims and the perpetrators, and change of the structural causes producing violence in society.

Nguyen Xuan Thanh



The injury poverty trap in rural Vietnam

Thesis defended: 9 December 2005
Opponent: Professor Egon Jonsson, Public Health Sciences, Institute of Health Economics, University of Alberta, Canada
Supervisors: Lars Lindholm, Nguyen Thi Kim Chuc and Anders Emmelin

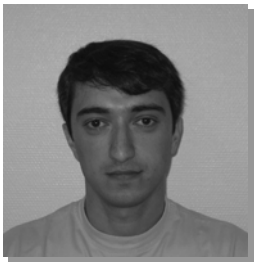
The focus of this study is the vicious circle of poverty and ill-health. The case is injuries but it could have been any lasting and severe disease. Poverty and health have very close links to economic development and to how health care is financed. Out-of-pocket payment seems to increase the risk of poverty while prepaid health care reduces it. The overall objective is to investigate the "injury poverty trap" and suggest possible solutions for it. A cohort of 23,807 people living in 5,801 households in Bavi district of Vietnam was followed from 1999 to 2003 to investigate income losses caused by non-fatal unintentional injuries in 2000 as well as the relationships between social position in 1999 and those injuries. For the possible solutions, a survey in 2064 household was performed to elicit people's preferences and willingness to pay for different health care financing options. The results showed that unintentional injuries imposed a large economic burden on society, especially on the victims. By two pathways – treatment costs and income losses – unintentional injury increased the risk of being poor. The losses for non-poor and poor injured households were about 15 and 11 months of income of an average person in the non-poor and poor group, respectively. Furthermore, poverty was shown to be a probable cause of non-fatal unintentional injuries. Specifically, poverty led to home injuries among children and the elderly, and adults 15 – 49 years of age were particularly at risk in the workplace. The middle-income group was at greatest risk for traffic injuries, probably due to the unsafe use of bicycles or motorbikes. About half of the population preferred to keep an out-of-pocket system and the other half preferred health insurance. People's willingness to pay suggested that a community-based health insurance scheme would be feasible. However, improvements in the existing health insurance systems are imperative to attract people to participate in these or any alternative health insurance schemes, since the limitations of the existing systems were generalized to health insurance as a whole. A successful solution should follow two tracks: prepayment of health care and some insurance based compensation of income losses during the illness period. If the risk of catastrophic illness is more evenly spread across the society, it would increase the general welfare even if no more resources are provided.

Scholarships for MPH studies 2005/2006

The Swedish Institute

Liana Yukhanyan, Armenia

David Bzhalava, Georgien

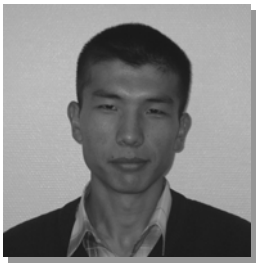


Madar Talibov, Azerbadjan

The East European Committee

Veronika Markova, Russia

Marjan Saber Ashkezari, Iran



Murat Tatenov, Kyrgystan

Elena Guryeva, Russia

WHO Collaborating Centre

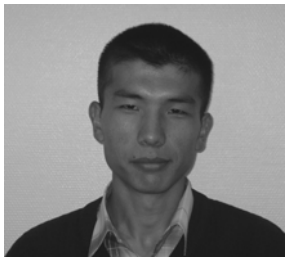
Since October 2003 we have been designated as a WHO Collaborating Centre for "Epidemiological Surveillance and Public Health Training".

The overall objectives are to develop and implement, in collaboration with WHO, epidemiological surveillance specifically of noncommunicable diseases, to support capacity building in developing countries and to promote and collaborate with member countries on surveillance and operational research needed to enhance the effectiveness of disease prevention and surveillance.

Terms of reference include:

- To conduct International Public Health Research Programmes for policy development
- To conduct an International Public Health Training Programme in epidemiology and field research methods
- To collaborate with WHO on the development of policy documents and guidelines for surveillance
- To provide guidance and recommendations, in collaboration with WHO, to developing countries undertaking the WHO STEPwise approach to noncommunicable disease risk factor surveillance
- To collaborate with WHO on the development and evaluation of methods for field surveillance in epidemiological field laboratories in low-income countries
- To collaborate with WHO on the lessons from the MONICA Project (with particular emphasis on Stroke).
- To promote, in collaboration with WHO, the INDEPTH Network (International Network of field sites with continuous Demographic Evaluation of Populations and Their Health in developing countries).

A chance of my life



Sometimes I still ask myself if it is true that I am in Sweden. From the very beginning of my arrival in Sweden in Arlanda airport I noticed the main characteristics of Swedish people: friendly, kind and hospitable. The second thing that impressed me was the Swedish language. I found it to be a nice, very melodious and soft language. Later on in Umeå, I heard one interesting saying from my neighbour in the hostel. It says that when Swedish people are talking it sounds as if they are singing at the same time. And I totally agree with that saying. At the very beginning after my arrival in Umeå there were two very kind and friendly ladies who introduced me into the situation of living and studying in Umeå. They are Mrs. Birgitta Åström and Mrs. Karin Johansson. I would like to express my deep gratitude to them.

I found Umeå, "the city of birches", as a cosy, picturesque and interesting city. Yes, that's Umeå with fresh air, clean environment and beautiful forests surrounding the city. Besides I would add something else to the description of Umeå city - this is the city of bikers as well. One can see here thousands and thousands of bikers.

After the beginning of the MPH program I realised and I still do, that I am getting useful and interesting information from our teachers. Free and open communication between staff and students during the lectures is very fruitful to me in order to understand the lectures' contents completely. Just do not hesitate and ask them if something is unclear to you, because they are always ready to help you! The study process is very well organized academically as well as technically! I feel proud that I am gaining knowledge and experience from the excellent professionals and pedagogues in the advanced Umeå International School of Public Health! Invaluable libraries with books, journals, and access to internet create additional irreplaceable conditions for the students' fruitful learning situation. Extra academic activity of students is also very interesting. The visits to the County Council, The Youth Clinic, as well as the football matches between department staff and MPH students organized by our department are just some examples of such extra academic activities. There are a lot of other entertainments for students organized by the International Office of the University. One should be mentioned: free English language courses. This helped me to improve my English language skills substantially.

Staying in a student corridor with my Swedish neighbours allows me to communicate with them, and to learn Swedish proverbs and to speak the Swedish language. It also gives me the opportunity to learn more in detail about Swedish culture, traditions and history. They are my cheerful and kind friends! Through this, I think I have discovered a lot about Scandinavian culture, traditions and history.

During the classes I enjoy communicating with my friends within our international group of students. They are from all the parts of the world. I was surprised by the broad diversity of countries represented. We are a very friendly group!

Umeå University is a big international University with a very friendly atmosphere, offering students to gain perfect education on all the professions that ever exist.

Finally, I would like to express my deep gratitude to the Swedish Institute that gave me this unique possibility in my life! I guess that it is my lucky fate in life that I am here now in Umeå meeting friends and getting excellent education at Umeå International School of Public Health! I will really miss Umeå city, our department's staff and my friends when I leave from here! Umeå will forever have a special place in my heart as a warm and happy memory of the time that I spent here!

Murat Tatenov
MPH student from Kyrgystan

Different, but interesting

Before coming to Sweden I expected that it would be a great experience, but not exactly in the way that it turned out. As a girl who has never been far from her home, family, friends and whatever she loves, it was too difficult for me to adapt to the new situation rapidly. The Umeå characteristics not only helped me to adapt more easily but also it made it worse and more difficult. I come from Tehran; a huge city that is more populated than the whole of Sweden, a city with large and big buildings, wide highways and also lots of people in the streets. My city life back home starts in the morning at 5 or 6 am and it continues till 12 pm or later. You can find most of the shops open at 9 or 10 pm and they are full of people shopping in the night. Umeå is completely different from Tehran. But whenever I look at my life here as a student of MPH, I realize that maybe this valuable experience will not ever repeat again. Here I met many people from all over the world, sometimes from countries of which I had never heard before. Now I have friends from different nationalities and I have learned so much from them and about them.

Actually I should say I love the weeks that there are classes in the university, with my lovely teachers, administrators, secretaries and friends.

Finally, I would like to thank Umeå University and specially the Umeå International School of Public Health (UISPH) who provided me this great chance. I am going to finish my studies in a few months and leave Sweden, the country of snow and peace. However, I am sure I will never forget the people that I met here. In the future whenever I talk about it with my children (maybe), I will have a smile on my lips and a huge feeling of respect in my heart.

Marian Saber
MPH Student from Iran

An unforgettable year

2005 is an unforgettable year in my life. A year witnessed how I became a doctor of philosophy, which I had never thought of before. A year witnessed my second time using a tie. The year has also witnessed the longest period I was far away from home so far.

Arriving in Umeå in the late July after 3 weeks in Heidelberg, I started working on the PhD cover story with anxiety. Two papers needed to be revised and one paper needed to be written before starting with the PhD thesis. It was scheduled to be defended on the 9th of September. My supervisor, Lars Lindholm, treated my nervousness with a four-day-fishing trip to a mountainous area about 300 km north of Umeå. This trip is also unforgettable because it combined both hiking and fishing - a fishing style totally different from what I have ever thought of being fishing. I also had a remedy to relieve the nervousness myself. The remedy was that I went fishing with my laptop instead of a fishing rod. However, I could not even touch the laptop once during the whole trip. My supervisors were successful in treating my tenseness because it was replaced by exhaustion. Consequently, it took me a week to recover, which resulted in an even greater nervousness because of the time pressure in combination with the fact that I did not know how to start writing a PhD thesis. The advice from my supervisor that I should start with the available information in the papers, such as methodology, results and etc. helped me solve this problem.

2005 was also a year that witnessed my most tired but happiest party. Both Swedish and Vietnamese dishes and entertainment of professors and scientists were served. In addition, both Western and Eastern music were played for singing and dancing. All participants at the party seemed to enjoy the presentation of “The Fishing Poverty Trap” comparing Swedish and Vietnamese fishing narratives, where I almost caught a big fish! When I came home from the party around 3 o’clock in the morning, I fell deeply into a sleep with a great gratitude for all the people at Umeå International School of Public Health and Hanoi Medical University, who partly realised my dream; and with a hope for a brighter future.

Nguyen Xuan Thanh
PhD student from Vietnam

From MPH to PhD student

I first set foot on the doorstep of Epidemiology unit of Umeå University in August, 2003. At that moment I had just arrived as a student in public health at the Umeå International School of Public Health. I do remember myself having sort of a commotion: I thought of if it was really a good idea to leave my family for nearly one year in order to be here? Besides this, I had no clear idea of what Public Health was and if it was really an important discipline for me to study.

Moreover, from the first sight the department building appeared to me as grey and unfriendly. I suppose I am not the only one who had a similar first impression of the department building.

This impression was gone as soon as I met Birgitta and Karin. In a few minutes the grey colour and outer coldness of the building has replaced by a warm and friendly atmosphere of the inside. Later on, during the first two months of my studies I became quite interested in the subjects that were taught, I got new friends, and I started to feel safer about being far away from home as I could talk to my family every day by the phone or via internet.

The soundest decision that I took at this time was to use the opportunities and the time that I got in Umeå as efficiently as possible. I thought: Okay, I am here for some purpose and I sacrificed quite a lot to be here… So I should try my best to make a good use of it! And I was studying really hard, trying to do my best, and trying to achieve the maximum that I could.

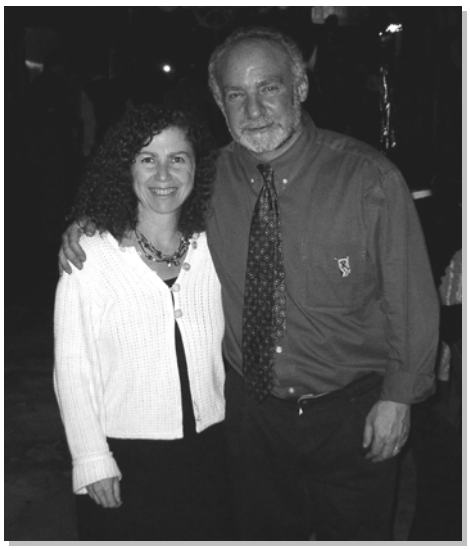
Approximately two and a half years have gone since that time. It was a time of my personal changes, the time of changes in my interests, points of view, and spheres of activities. During this period I have defended my Master's Thesis, developed and started teaching my own course of Epidemiologic Research Methodology at my home medical university in Arkhangelsk, Russia.

In autumn 2005 I entered the door of Epidemiology unit with a new status of a candidate for becoming a PhD student. And this time I have a new status once again – I have got the opportunity to teach in the Epidemiology course as a part of my pedagogical training at the unit.

So now I can say that the Epidemiology unit has become an integral part of my life. It has become an important part of my past and is a place of my present studies and work. I also do believe that my future will be tightly associated with this grey building that is absolutely not as grey as it seems at first sight.

Alexander Kudryavtsev
PhD student from Russia

"Coffee-time" – a social as well as a physiological high!



We started work as guest researchers in Epidemiology and Public Health Sciences at the beginning of August, 2005. The corridors were quiet, the offices largely empty. Over the next couple of weeks, colleagues gradually returned from their summer vacations, replete with light, sun, leisure, friends and family. As people tend to do in new environments, we noted aspects of Epidemiology and Public Health Sciences that appeared both similar and different from other academic institutions where we've spent time, notably the School of Public Health at the University of the Witwatersrand in Johannesburg, the London School of Hygiene and Tropical Medicine, and the Harvard School of Public Health in Boston. One of our earliest observations at UISPH was the institution of "coffeetime". As we became aware that staff left their offices for coffee and a chat not just once a day, but morning AND afternoon, we looked at each other incredulously! "We will NEVER get enough work done this way", we lamented, "there are not sufficient hours in the day to achieve all we've set for ourselves, and spend time conversing with new colleagues".

How wrong we were! Day-after-day we returned to our offices invigorated and more productive than when we'd left them half an hour before – effects not fully explained by the caffeine surging in our blood stream. "Coffee-time" proved to be far more than simply a physiological caffeine high. It provided the opportunity to meet colleagues and discuss issues relevant to current work, so pushing those efforts forward. But most important, those valuable minutes over coffee provided the opportunity for social interaction that helped build and sustain us over the remainder of the day. The social investment paid off amply with respect to work output. We work in the MRC/Wits University Rural Public Health and Health Transitions Research Unit, which is sited in Limpopo Province, South Africa (adjacent to the Mozambique border). The Unit incorporates the Agincourt Health and Demographic Surveillance System as well as a number of interdisciplinary projects which range from the biomedical to the social and anthropological. Within this portfolio of work, there is a focus examining social capital and its impact on personal well being in poor rural communities. Our experience in Epidemiology and Public Health Sciences, based on participant observation with high inter-observer correlation, is that social capital in the work place enhances the well being of staff and contributes significantly to improved work output. Our grateful thanks go to all those with whom we shared a cup of coffee and a chat during our three memorable months in Umeå – we miss those moments of collegial contentment and eagerly anticipate future opportunities.

Kathy Kahn and Steve Tollman

Guest researchers from South Africa, August to November 2005

1. Institutional setting

Organisation

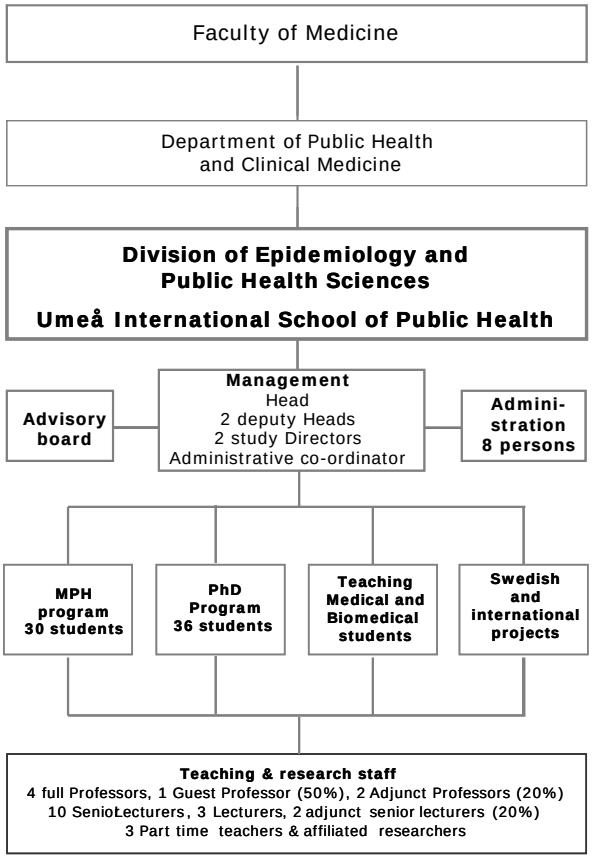


Figure 1. Organisational chart of division within department and faculty

Our division is one of five subunits within the Department of Public Health and Clinical Medicine, as shown in the chart above. Subsequently all formal decisions concerning the Division are taken by the Board of the Department. The advisory board of supervisors serves to address policy and research training issues in our division, and more specifically to assess candidates for PhD training. Staff affairs are handled by the management of the division.

Some of our faculty are full time employees, others attached on a part time basis. Most of the latter group are former PhD students continuing their research and contributing as teachers and supervisors.

The informal structure in our division is represented by different groups with specific objectives. There is a group responsible for handling computer issues for employees as well as students, a Library group dealing with the acquisition of books and journals, and a group with special responsibility for the distribution of office space among employees. Furthermore a specific group is responsible for planning and organising a summer course entitled *Epidemiology and Field Research Methods*. Most issues within the Division are also discussed in a bi-weekly staff meeting.

Staff development

At present 45 research and administrative posts are attached to our division, however, not including all international and doctoral students employed or associated with other departments. Of these, 24 are women (53%). Of the 7 professors, including up-graded and adjunct, as well as affiliated professors, 1 is female. Of 15 teachers/researchers employed as senior lecturers, adjunct senior lecturers or lecturers, 5 are women. Of 23 Swedish PhD students currently registered, 12 are women and

among 13 international PhD students, 5 are women. Six out of 7 administrators are women.

Of the 39 students who have completed their PhD during 1987-2005, 18 were women. Twenty-two of these were Swedes, 11 of which were women. Of the 22 students who have finished their PhD since 2000, 12 were women.

During 2000-2005, 32 students were admitted for PhD studies, 15 of which were women. The gender balance is illustrated in Figure 2 below.

When considering the female:male ratio of 53:47, which in Sweden is defined as a gender balanced work organisation, we can conclude that in general we have obtained a gender balance among the staff. The groups that still have a gender imbalance are mainly professors/researchers with a majority being men, and administrators where most employees are women.

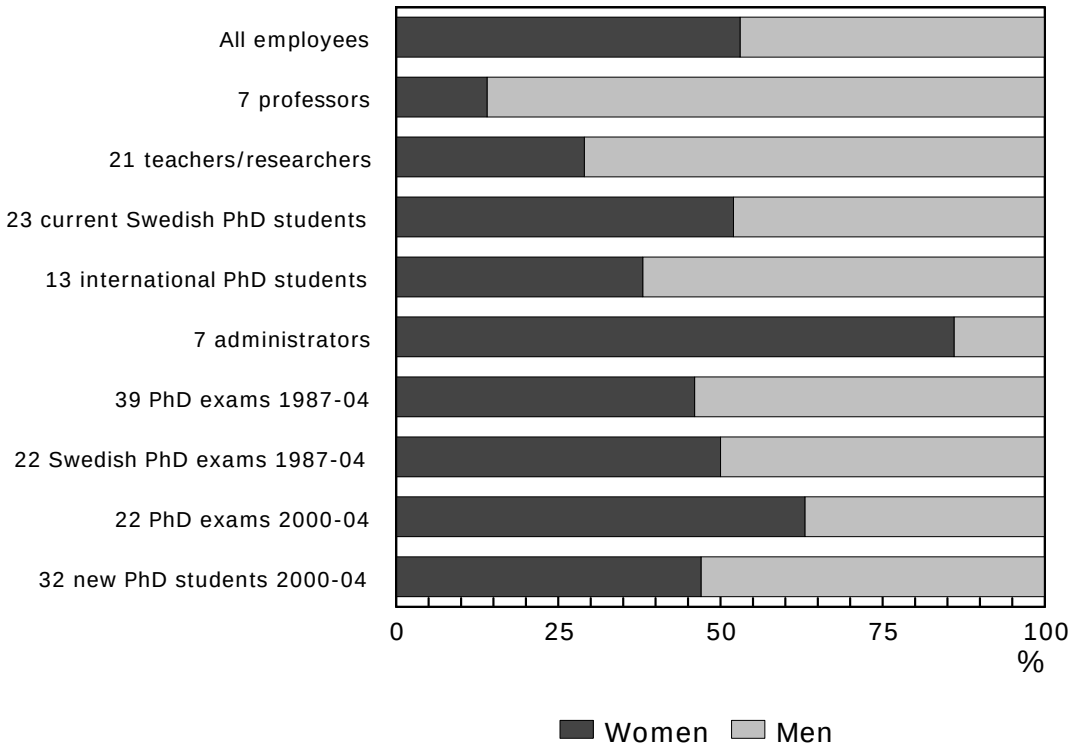


Figure 2. The sex distribution among all 45 staff members employed at or associated with our academic environment by subcategory in 2005.

In all, 36 doctoral students (Table 5, p 56) are registered (2005) with our research programme or receive major tutorial with us. Sixteen of the research students' group are physicians, and the others represent a mix of sociologists, economists, social workers, dentists, environmentalists, physiotherapists and nutritionists. The 23 post-doc personnel represent environmental, paediatric, reproductive, nutritional and oral health but also medical sociology, statistics and health economics. In terms of person-months of work at the division we have reached a "steady state" corresponding to about 30 full-time staff; 23 34 and 43% accounted for by administrative, pre-doc and post-doc staff respectively (Figure 3).

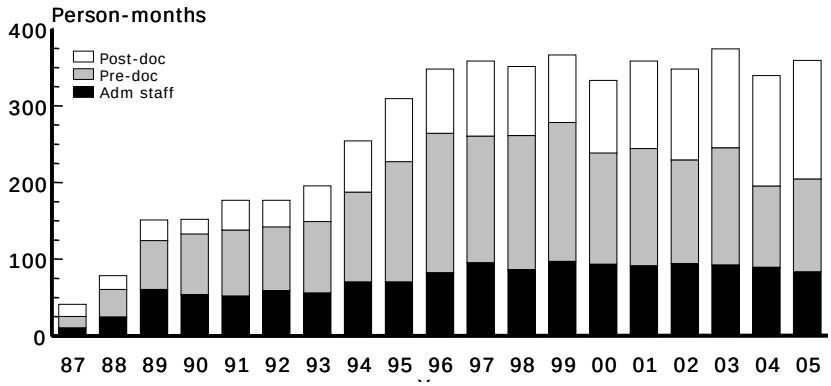


Figure 3. Development of person-months at work by staff category 1987-2005.

Budget

The total budget (Figure 4) for the year 2005 amounted to SEK 26.5 million, 66 % of which consisted of external Swedish research grants or grants for bilateral development research projects (Figure 5).

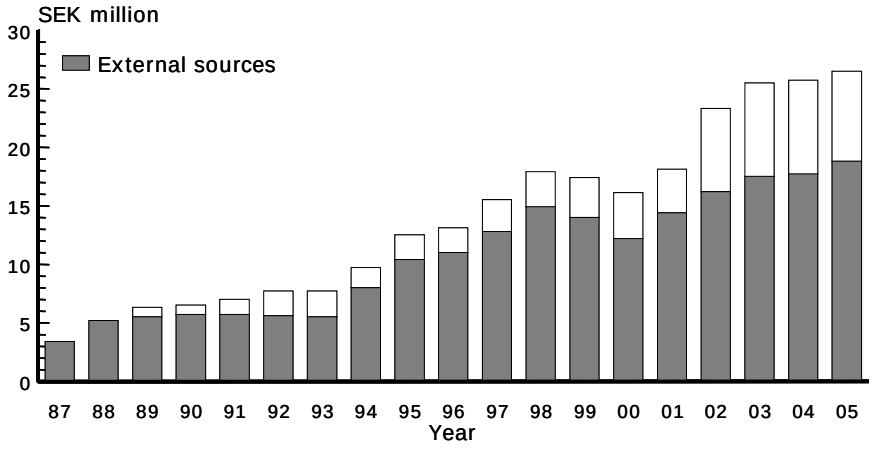


Figure 4. Development of total budget 1987-2005

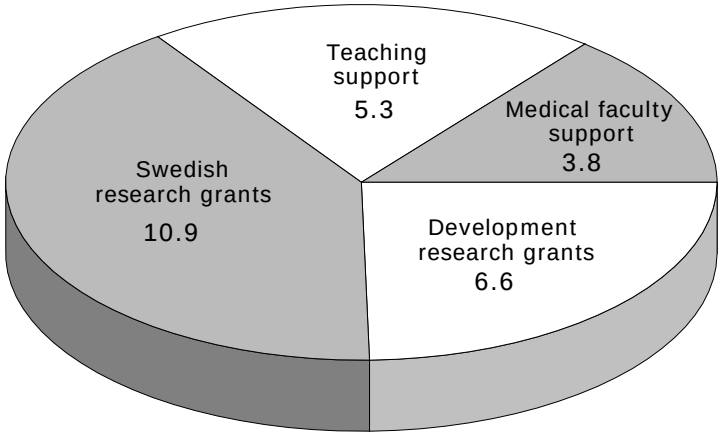


Figure 5. Financial sources for the fiscal year 2005 (in SEK millions).

During the past 10 years, we have seen an increase in core support from the faculty from the 1.5 million SEK in 1994 to the present 3.8 million. The teaching support, and the associated responsibilities, have increased from 0.6 to the present 5.3 million SEK. The latter is mainly a consequence of the expansion of the public health teaching to the complete international MPH programme and our increasing involvement in the medical undergraduate programme (see also p. 50). The balance between Swedish and development research, see Table 1, has shifted to about 70:30 lately due to long-term programme support from the FHI, National Public Health Institute and FAS, the Swedish Council for Working Life and Social Research. Other funds are supplied through project grants from Sida/SAREC, FAS, EU and the Vårdal Foundation. The project grants are further specified in Table 1.

Teaching support from the university has been granted for our Public Health programme and from Sida/SAREC for our Summer Course. For the sixth year scholarships were offered by STINT, and from the County Council (Table 2).

The output side of the budget is shown in Figure 6 by type of expenditure. Thus, almost half is accounted for by salaries and 12% by the operating budget. It should be noted that the overhead support to the university administration was SEK 1.53 million during 2005.

Progress

There are no objective measures to assess the progress of an activity. However, an ultimate and measurable outcome criterion is the number of publications (Figure 7). The ups and downs of the curve are a proxy for and a result of the process where research ideas, their gestational period, project planning, data collection and analysis ultimately, after fairly long induction periods, result in a measurable outcome such as a published paper.

As part of the budget model adopted by the Medical Faculty since 1996, three parameters are used to assess each of its departments: number of publications; number of research theses; and number of external grants awarded. Each department is given a budget, based partly on this assessment system.

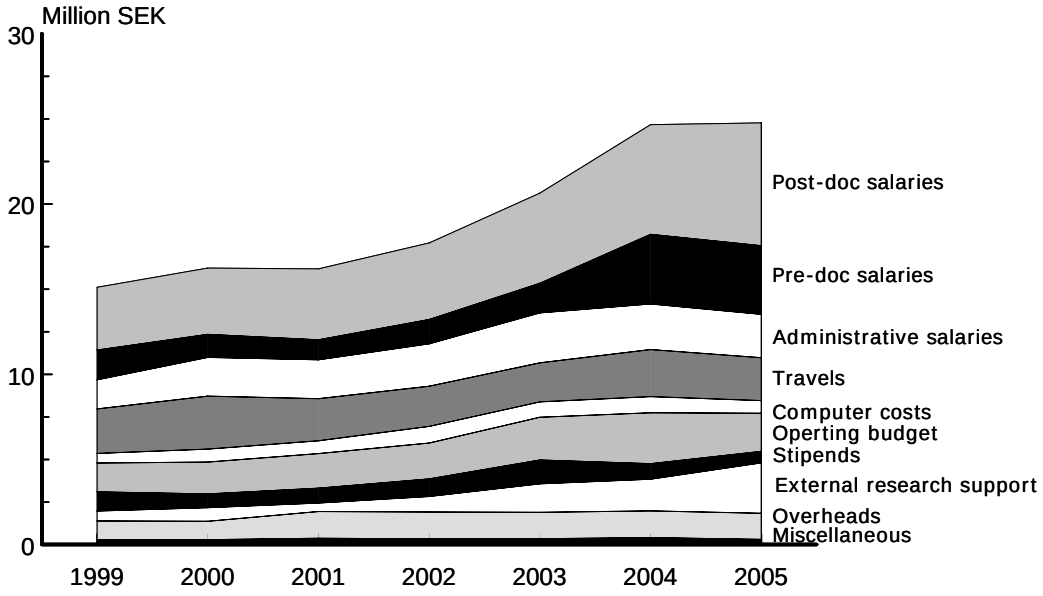


Figure 6. Budget development 1999-2005.

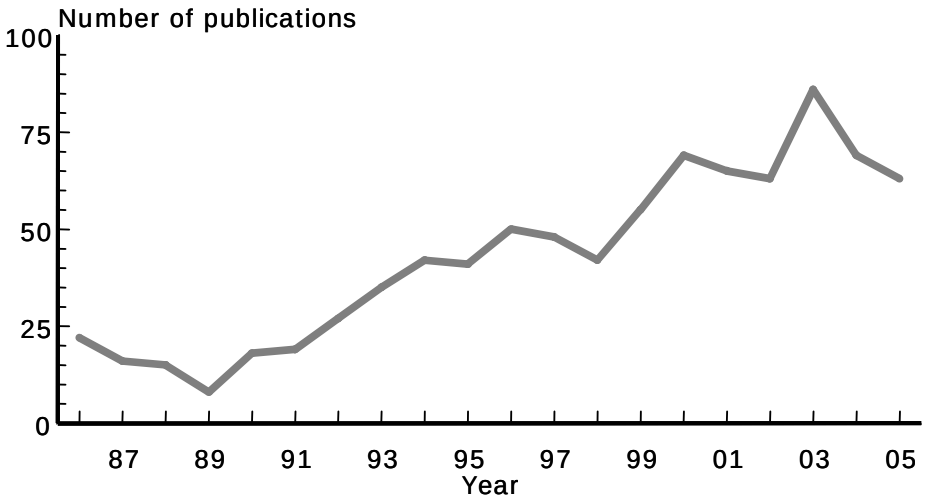


Figure 7. International publications in peer reviewed journals from our unit 1986-2005.

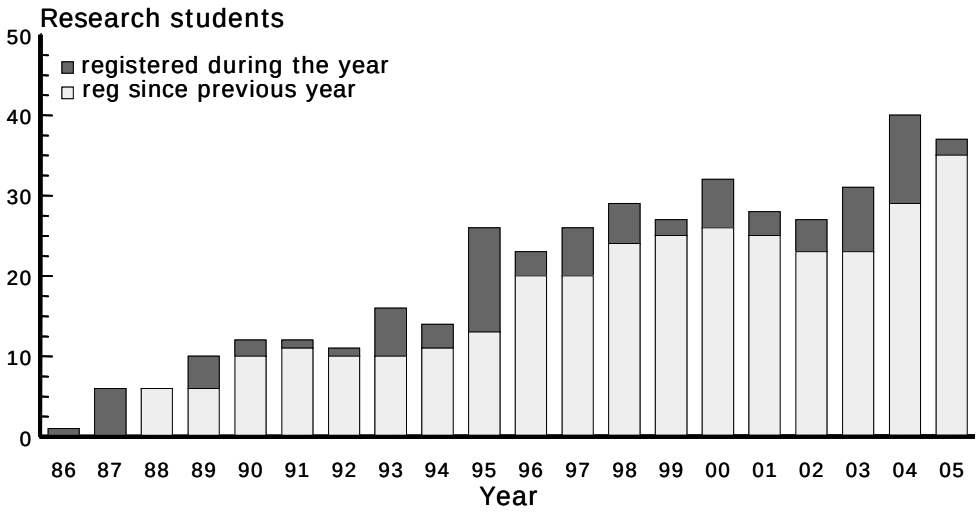


Figure 8. Research students at the division 1986-2005.

Figure 8 shows the number of research students over time, one of the parameters for the budget model assessment system. During 2005, 36 predoc personnel were associated with our department, 2 of which were registered during the year. A total of SEK 12.2 million is thus channelled to the departments as a bonus; we acquire 6.8 percent of this, ranking us number 3 of the 52 divisions of the medical faculty. Figure 9 shows the number of doctoral dissertations over the 17 years that we have existed as an independent research environment.

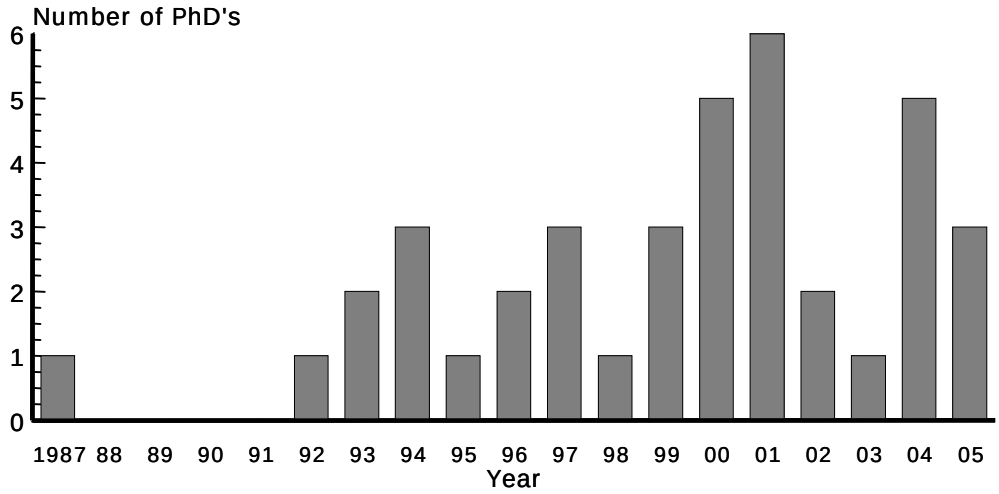


Figure 9. Doctoral dissertations 1987-2005.

Table 1. Project grants for 2005.

Funding source	Title of project/programme	SEK
FAS	Reducing inequities	1 180 000
	Den epidemiologiska transitionen i tre utvecklingssamhällen i svenskt perspektiv	700 000
	Scandinavian journal of Public Health (support for Editorial Board)	200 000
	Kan folkhälsan förbättras genom att det sociala kapitalet stärks?	500 000
	Gästforskare: Komparativa studier inom longitudinell epidemiologi i låg- och medelinkomstländer	165 000
FORMAS	Celiaki. Är det dags för primär prevention…	653 800
VR	Does screening generate ill-health and increased	525 000
	Celiac disease. Has time come for primary prevention	375 000
Sida/SAREC	Butajira health in transition study, Ethiopia	700 000
	Coordination and administration of research projects in cooperation with UNAN-Leon	525 000
	Reproductive and child health – Nicaragua	655 900
	TANSWED HIV programme in Tanzania	528 000
	Health Systems research, Vietnam	700 000
	Reproductive health in Tanzania	277 000
	Violence against women, Tanzania	476 950
	Child Caretaking of siblings in Nicaragua: a public health approach	500 000
	Epidemiology for Public Health Intervention – program support	200 000
	Feasibility study of urban air pollution measurements - planeringsanslag	75 000
	Domestic Violence in urban and rural Indonesia – planeringsanslag	75 000
	Planning grant for development of a Network for Method development	75 000
	Network for methodology development in international public health	1 490 000
EU	Evaluation of effectiveness of breast cancer screening with mammography	59 306
	REACT	230 000
County Council	Universitetslektor i hälsoekonomi	202 500
	Hinder och möjligheter för en mer hälsofrämjande hälso- och sjukvård	160 000
	Stroke prevention	85 000
	Universitetslektor i Epidemiologi	930 000
	Universitetslektor Hälso- och sjukvård	470 000
	Hälsofrämjande sjukvård utifrån professionernas perspektiv	58 000
	Hälso- och sjukvårdens bidrag till en utvecklad folkhälsa – dokt lön	1 430 000
	Databas för Västerbottens hälsoundersökningar	368 000
	Utveckling och validering av av riskekv	100 000
FHI	Samarbete mellan FHI och Epidemiologi	1 062 000
Vårdalstiftelsen	Does priorities in health care vary ethical, societal or economic preferences?	600 000
	Taylor&Francis	165 000
Miscellaneous		1 458 900
Total		**17 955 356**

Table 2. Post graduate and research training support and stipends for 2004/2005.

Funding source	Title of programme	SEK
Medical faculty	Master of Public Health Programme: - Public health, 10 points - Epidemiology, 10 points - Biostatistics, 10 points - Medical sociology, 10 points - Qualitative methods, 10 points - Evaluation methods in community intervention, 5 points - Nutritional epidemiology, 5 points - Hälsoekonomisk utvärdering, 5 poäng (in Swedish) - MPH thesis, 20 points	2 087 000
	Basic support	200 000
	International summer course in Epidemiology and field research methods	131 000
	Alkohol, droger och samhälle	117 000
	Research methodology, 5 points and Advanced biostatistics, 5 points	175 000
	Biomedicinsk grundutbildning, 5 poäng (in Swedish)	166 000
	Läkarutbildning	1 092 000
Sida/SAREC	International summer course in Epidemiology and field research methods	400 000
STINT	Scholarship for the MPH programme	325 000
Sida	Minor Field Studies (MFS)	173 000
East-European Committee	Public Health Policy and Practice – pedagogical training and capacity building	307 500
County council	Scholarships for PhD studies	150 000
Total		**5 323 500**

Special events during 2005

Department meeting in Strömbäck, Umeå

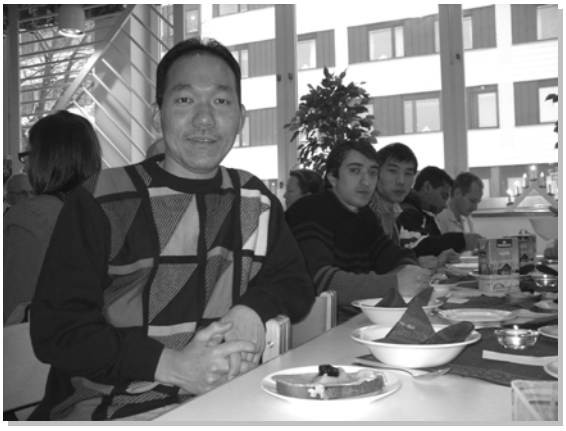
Scholarships from the County Council in Västerbotten was awarded to Alexander Kudryartsev and Fatwa Tetra Dewi during 2005

A cake is served in the coffee room

Kjerstin Dahlblom's midterm seminar

Not so traditional Lucia celebration

A Christmas lunch together with the MPH students



Staff

Stig Wall. Professor of epidemiology and health care research and head of the division. Epidemiologist with a social science background. Research on epidemiology and international health, environmental and social epidemiology, prevention and medical technology assessment. Chief Editor, Scandinavian Journal of Public Health.

Urban Janlert. Professor of Public Health, specialist in Social Medicine. Deputy Head of Division. Research in social epidemiology (unemployment, social deprivation). Also at the Department of Community Medicine at the County Council.

Ann Öhman. PhD, Ass prof. Deputy Head of Division. Research on social epidemiology (work, stress and chronic pain from a gender perspective and international health, Nicaragua and Indonesia.

Anna-Lena Johansson. Administrative co-ordinator. Responsible for departmental and staff administration and budgeting. Coordinating financial reports within the department. Also involved in the collaborative studies in Vietnam.

Monika Appel. Social scientist and research student. Doctoral studies on the project ”Creative competition or hampering hierarchy – a study concerning the academic working environment focusing on the doctoral student”.

Erik Bergström. MD, PhD. Specialist in Paediatrics and School Health. Associate professor of epidemiology and public health. Head of the Paediatric Clinic in Västerbotten County. Research on child and adolescent health. Also attached to the Department of Clinical Sciences, Paediatrics.

Peter Byass. Guest Professor in international health, with particular responsibilities for supporting the field laboratory sites in Ethiopia (Butajira) and Vietnam (Bavi), as well as some teaching in Umeå. Works mainly on the epidemiology of tropical infectious diseases and the implications for health services in developing countries, with an increasing focus on the current epidemiological transition in such circumstances. Also attached to the School of Community Health Sciences at the University of Nottingham, U.K. and the IMMPACT Project at the University of Aberdeen, U.K.

Kjerstin Dahlblom. MPH. Doctoral studies on children's perspectives of caretaking in León, Nicaragua, with a qualitative and quantitative approach.

Lars Dahlgren. Professor of medical sociology. Research on social planning, HIV/AIDS in Tanzania and on social norm systems. Special interest in developing qualitative research methods. Also attached to the Department of Sociology.

Kerstin Edin. RN midwife, Master of Public Health. Doctoral studies on intimate partner violence with special focus on gender and on the period of pregnancy. Also affiliated to the National Graduate School of Gender studies and the Department of Obstetrics and Gynaecology.

Curt Edlund. PhD. Adjunct senior lecturer in Public Health and social worker. Studies in sick-listing and vocational rehabilitation and on causes of high incapacity rates and flexible sick leave. Also attached to the Social Insurance Office.

Berit Edvardsson. MD, General Practitioner. Doctoral studies on patients with symptoms related to indoor environmental factors. Also attached to Deptartment of Family Medicine.

Anders Emmelin. Lecturer, epidemiology. Doctoral studies in air pollution epidemiology. Co-ordinator of research collaboration with the Community Health Department, Addis Ababa University in the Butajira Rural Health Project. Epidemiology teacher and director of the Master of Public Health Programme.

Maria Emmelin. PhD. Senior Lecturer in qualitative methodology and medical sociology. Studies on self-rated health in public health evaluation, HIV/AIDS research and reproductive health. Involved in research collaborations with Tanzania, Ethiopia, Indonesia and South Africa. Managing Editor of Scandinavian Journal of Public Health.

Anna-Karin Hurtig. MD, DTM&H, MSc, DrPH. Senior lecturer in public health. Research areas: Infectious disease policy, environmental epidemiology and health impacts of globalisation processes.

Ulf Högberg. Professor, gynaecologist/obstetrician. Research on obstetrical epidemiology, maternal and reproductive mortality and domestic violence in Sweden and Ethiopia. Also attached to the Department of Obstetrics and Gynaecology.

Anneli Ivarsson. MD, PhD. Senior lecturer in epidemiology. Specialist in Paediatrics. Extensive research on celiac disease, and responsible for the National Swedish Register of children with this disease. An interest also in Child Public Health research both in Sweden and internationally. Also attached to the Research and Developmental Unit of the Västerbotten County Council.

Helene Johansson. Physio-therapist. Doctoral studies on "A more health promoting health care service from the perspective of health professionals"

Karin Johansson. Programme administrator for the International School of Public Health. Guest student co-ordinator.

Ingela Krantz. MD. Adjunct professor in public health and infectious disease epidemiology. Research on female genital schistosomiasis, herpes infections and ethics in public health interventions. Acting director at the Skaraborg Institute for Research and Development, Skövde and head of the Epidemiology unit at the Västra Götaland Regional Board of Health.

Carina Källestål. PhD. Adjunct senior lecturer, paediatric dentist. Head of Evaluation Unit at the National Public Health Institute. Research on dental epidemiology and prevention. Co-ordinator for the bilateral project on reproductive and child health in León, Nicaragua.

Barbro Larsson. Administrative assistant working with the library and also involved in the academic working environment project.

Torbjörn Lind. PhD. Paediatrician. Studies on micronutrients, especially iron and zinc supplementation during infancy and childhood in Sweden and Indonesia. Also holds a position as resident physician, Department of Pediatrics, Umeå University Hospital.

Lars Lindholm. Associate Professor, senior lecturer of Health economics. Studies on equity in health economic evaluation and the use of epidemiological data in the distribution of health care resources.

Lena Lundström. PhD, physiotherapist. Research on rehabilitation in light of different theories of health. Also holds a position as physiotherapist at the Occupational Medicine Unit, Västerbotten County Council .

Curt Löfgren. Senior lecturer in Economics. Doctoral studies in health financing, particularly the role of people's preferences when introducing health insurance in third world countries.

Göran Lönnberg. Statistician, research assistant. Involved in the projects: "Västerbotten Intervention Program" (VIP), "The Diabetes Incidence Study in Sweden (DISS)", the Celiac disease National Swedish Register and the Butajira Rural Health Project, Ethiopia.

Ingrid Mogren. MD, Ass prof, Gynaecologist/Obstetrician. Lecturer in reproductive health, obstetrics and gynaecology. Research on complications of pregnancy and delivery and pregnancy-related future health problems for both the woman and the offspring. Reproductive health in developing countries. Also attached to the Department of Obstetrics and Gynaecology.

Lena Mustonen. Editorial assistant of Scandandinavian Journal of Public Health. Information manager (the web site, UISPH newsletter and Annual Report). Also working with course administration and administration within the Kagera Aids Research Project and the childhood diabetes registry.

Anna Myleus. Project assistant, medical student. Involved in research projects on celiac disease.

Maria Nilsson. BA Social work. Doctoral studies on "Health interventions targeting young people - to prevent the use of tobacco". Also attached to the department of Community Health at the County Council.

Margareta Norberg. MD, General Practitioner. Doctoral studies on early risk markers for the development of type 2 diabetes mellitus and the metabolic syndrome.

Fredrik Norström. PhLic. in Mathematical Statistics. Research on celiac disease and lecturer in Biostatistics. Statistical consultant in epidemiological and medical research projects.

Lennarth Nyström. Associate professor, Senior lecturer in biostatistics. Research is focused on the evaluation of mammography screening. Other research includes epidemiological studies of asthma, diabetes, epilepsy and multiple sclerosis. Also involved in studies of reproductive health in Zimbabwe and Tanzania and environmental tobacco smoking in Indonesia.

Jerzy Pilch. Project administrative assistant. Involved in projects on diabetes epidemiology and in the ETICS project. Responsible for computer network and maintenance at the department.

Måns Rosén. Adjunct professor, epidemiology and public health. Research on register-based epidemiology, regional epidemiology, health services research, health economics and assessment of primary prevention. Director of the Centre for Epidemiology (EpC) at the National Board of Health and Welfare.

Anna Rosén. MD, project assistant. Involved in research projects on celiac disease.

Klas-Göran Sahlén. Nurse, MPH. Doctoral student. Lecturer in health economics and qualitative methods. Research studies in the area of aging and health economics.

Miguel San Sebastian. MD, PhD. Senior lecturer in public health. Research areas: Environmental epidemiology, indigenous health (Amazon region), and health impacts of globalisation processes.

Barbro Skog. Course administrator within the undergraduate medicine programme. Responsible for the department's library and subscriptions.

Berndt Stenberg. Associate professor, occupational dermatologist. Research on skin symptoms related to indoor environmental factors in office work, nickel allergy and on psoriasis. Also attached to the Unit of Dermatology.

Hans Stenlund. Senior lecturer in biostatistics. Statistical consultant in several epidemiological and medical research projects. Director of research training.

Ann Sörlin. Project assistant, physiotherapist, master of sports medicine. Involved in research projects in gender equality and health.

Susanne Walther. Working with budget and departmental administration. Also involved in the project on celiac disease, and research co-operation projects with Ethiopia.

Lars Weinehall. Associate professor. Senior lecturer in health care research. Research on the role of Primary Health Care in prevention. Also attached to the Research and Developmental Unit of the County Council.

Maria Wiklund. Physiotherapist. Doctoral studies on health promotion and aspects on prevention of psychosomatic and stress related problems in adolescents, gender perspective. Also attached to department of physiotherapy.

Birgitta Åström. Co-ordinator of student support. Administrator in research and education including scholarshiops (MFS, Västerbotten County County Council etc). Course administrator research courses. International co-ordinator at the department of Public Health and Clinical Medicine. Project administrator for the research and teaching exchange programme with Indonesia. Representative for the working environment at the department.

2. Highlights of some of our recent and future research

Our ambition is to foster and sustain an international research and teaching environment. We take a global health perspective when approaching public health issues in Sweden as well as internationally with collaborative projects in Europe, United States, Latin America, Africa and Asia. Major public health risks of today recognize no geographical borders and the immediate link between global thinking and local action is obvious. Also, the most serious health threats are trans-national and attempts at their control inevitably lead us into a global arena.

By using modern epidemiological strategies as well as qualitative approaches we retain a social and distributional perspective on health. This means that our international collaborative projects focus on demographic changes and poverty related public health issues, e.g. reproductive health and the health transition, and our Swedish research addresses inequality in health and the impact of prevention in different social strata. The study bases in the Swedish research are often national or regional registers and longitudinal cohort and case-referent studies while in environments lacking this infrastructure study bases are created through actual fieldwork in so called epidemiological field laboratories.

We have been closely involved in the development of epidemiological field laboratories, specifically in Ethiopia, Vietnam, Indonesia and Nicaragua as well as with the INDEPTH network (www.indepth-network.org) which currently includes 36 sites in 19 countries. This will create opportunities for sharing and exchanging health data between some of the world's poorest countries as well as a platform for developing strategic and methodological issues. Within that context we are addressing issues such as field methods for long-term surveillance, appropriate sampling techniques, methods for extrapolating and generalising findings from field laboratories and approaches to death registration in the absence of autopsy findings. This collaborative platform also enables major public health problems to be addressed. The emerging health transition can thus be studied since the host countries are at different developmental stages, representing different health care systems as well as disease patterns. The field laboratories are also ideal environments for small-scale trials and evaluations of health care reforms and public health measures. A central research question is to what extent it is possible for low- and middle income countries to take advantage of, e.g through research collaborations, high income countries positive chronic disease trends while at the same time alleviating the negative consequences of globalization.

In 2003 we were designated as a WHO Collaborating Centre to develop and implement, in collaboration with WHO, epidemiological surveillance specifically of non-communicable disease, support capacity building in developing countries and promote, in collaboration with member countries, surveillance to enhance the effectiveness of disease prevention. Moreover, our hosting of the Editorial Office for Scand J Public Health gives us a responsibility and an entry point for sharing public health research internationally.

In national and international collaborations we have contributed to the development of public health theory and to its dissemination into public health practice. Our research on cardiovascular disease (CVD) and community interventions drawing on methods from epidemiology, sociology and health economics have demonstrated the sensitivity of the public to inequalities and suggested that an active primary health care provider is a significant partner of the preventive structure. This outcome is one of the few demonstrations of a narrowing health gap between privileged and non-privileged social groups. Our international research has also suggested legislative measures, e.g. on domestic violence and environmental pollution. We have coordinated multi-centre studies on celiac disease and mammography that have actively promoted revision of the national and European guidelines for infant feeding and breast cancer screening. Experiences from the Västerbotten Intervention Programme (with the VHU data base covering a population of 95,000, with 20 years of longitudinal data) have also influenced the ongoing development of field sites in several low- and mid-income countries in order to better understand the epidemiological transition in general and specifically the preconditions for CVD prevention in these countries.

We participate in public health processes through memberships of a number of local, regional, national and international bodies, e.g. the Swedish Council on Technology Assessment in Health Care, SBU, the Advisory Board for the Evaluation of the

National Mammography Service-Screening Programme, the European Commission's Task Force for Epidemiological Guidelines for Quality Assurance in Breast Cancer Screening, the National Public Health Committee and the European Commission's Task Force for Tobacco Prevention. Researchers from our department are currently scientific public health advisers to the National Board of Health and Welfare, The National Epidemiologic Centre, the National Public Health Institute, Västerbotten County Council and Municipality Boards in the North Sweden region. We were key advisers behind the Västerbotten County Council Public Health Policy Programme.

Methodologically, the combination of quantitative, large scale surveillance analyses and in-depth, qualitative approaches is a significant characteristic of our research environment. This is exemplified by projects on domestic violence in Nicaragua and on HIV in Tanzania. Both combined quantitative and qualitative methodologies with an action research perspective, starting from population-based studies on prevalence and risk factors. In-depth interviews and focus groups were used to help understand how women coped with domestic violence and how villagers interpreted and lived amidst the HIV epidemic. In Nicaragua, results were used by the National Network of Women Against Violence to secure political support for a proposed new law on domestic violence that had been presented to the National Assembly, which in the end passed into law. In Tanzania, the longitudinal design enabled us to discuss socio-cultural factors influencing the magnitude of the problem in the early phases of the HIV epidemic as well as the impact of interventions in explaining the significant decline observed later. The research on domestic violence in Nicaragua was also instrumental in bringing the topic onto the public health research agenda and for the recently published WHO Multi-Country study.

We are also involved in research and research training in collaboration with a number of universities, departments or NGOs in the US and Europe and with other Swedish academic and public health institutions, e.g. the County Council in Västerbotten (VLL), the National Public Health Institute (FHI) and the Epidemiologic Centre at the National Board of Health and Welfare (EpC). A common interest between these stakeholders in identifying and assessing the health-promoting role of the health care system relates to several of the target areas for public health in Sweden.

Our future research will be guided by our international collaborations as illustrated above as well as by our Swedish research related to health policy, economics and community interventions. Two partly new strands may be identified for our future research activities:

Revisiting the theoretical and practical basis of public health work

Our research during the past 20 years has increasingly led us into questions about the balancing of the outcome and ethics of public health work against its social and economical consequences. This has brought to the fore a need of new evaluation models moving from "efficacy" to "effectiveness" studies and with a process analytical approach. A central issue is also at what level interventions should be targeted – at societal structures to promote physical, economical and social environments or at individuals to modify behaviour. More research is also called for to assess how interventions are perceived. As part of the evaluation of the Norsjö intervention self-reported health was used to illustrate how a community intervention can act as a social movement and influence health related norms and attitudes. Perception of one´s own health was also shown to interact with established biomedical risk factors, suggesting the importance of making individuals beyond their medical status seen. Social and gender equity are other central dimensions when evaluating public health work. What generates unfair health differences? The concept social capital has been suggested to better understand the relationship between social inequality and health and mobilizing the social capital may thus potentially be a lever in community interventions. We are exploring this in local Swedish settings as well as in several of our international collaborations. This is in line with our ambition to develop intervention models that are gender-, culture- and contextually bound and which as alternatives to the traditional top-down RCT model aim to empower for community involvement in a local small-scale context. The workplace and the school are two under-utilized arenas for public health work both in poorer and affluent countries. The school also needs to be recognized as a work environment for children and adolescents and is naturally a platform for health interventions, e.g. for the promotion of non-smoking and physical activity.

Health systems and the new threats to health

During the 20th century, Sweden, like many European countries, underwent an epidemiological transition from predominantly infectious causes to non-communicable diseases (NCDs), with major implications for health services, social support and longevity. This transition was partly fuelled by socioeconomic development, as well as by specific medical innovations. Many of the world's poorer countries are still in the process of similar transitions and are currently at different stages.. We are documenting recent stages of transition in northern Sweden through the Västerbotten Intervention Programme and the WHO Monica Study in northern Sweden and have seen mortality from cardiovascular disease decline markedly since the mid 80s. As members of INDEPTH and in collaboration with WHO we have access to timely and longitudinal data on global changes in population and health from a large number of countries. We are exploring the driving forces behind and consequences of the emerging epidemic of chronic diseases in disadvantaged communities by contrasting the changes in social and risk factor patterning and disease occurrence in three rapidly changing communities in Indonesia, Vietnam and Ethiopia with those in a community with a rapid decline in cardiovascular mortality (northern Sweden) and by reference to the historical evidence.

In parallel with the epidemiological transition, systems for financing and producing health care are changing. The driving forces are similar – economic and information growth, migrating populations and a mobile capital. Comparative studies of health systems may address critical global health issues, e.g. whether better health fosters economical growth, whether gender equity promotes better health, whether rapid economical growth widens health gaps and how the system for health finance may impact on public health.

As population health increases, expectations are also growing on a clearer health orientation of the health care system. The national public health goals in Sweden thus identify it as one of the major arenas for public health work. While we have shown that the health care profession has an ambition to widen their mandate to strengthen preventive and rehabilitation work, it is still undervalued and underserved. Key research issues are studies on perspectives and attitudes among professional groups on health and health promotion to develop partnership models with an increased decision-making latitude.

Sweden is a role model for organizing its health care, especially within maternity and child care. Nevertheless, there are strong motives for further investments to counteract the new threats created by the modern society, not the least for the coming generation but also for an ageing population. Increasing magnitude and awareness of the growing proportion of elderly people also raises questions on how living conditions of the old and young are affected and whether our society is ready to accommodate these changes. We will therefore in partnership with regional and local health and social care authorities and through new interdisciplinary research alliances enter into the field of child and adolescent as well as adult health with longterm intervention activities to supplement current individual programs.

3. Three problem areas - on-going Swedish and international research

Our research activities are characterised by group work across disciplines and cultures. Epidemiological reasoning and methodology are central for disease surveillance, in the search for risk factors as well as in the planning and evaluation of intervention programmes. Projects are therefore grouped under three problem areas; aetiological, social and evaluative research, briefly described below.

The first problem area

often starts from a specific disease or a suspected exposure. *Aetiological studies* focus on the relation of disease occurrence to social conditions and exposures to environmental and lifestyle related agents. In Sweden population-based registries of mortality and diseases enable analysis of changing patterns of mortality by geographical and social groups and also enable the surveillance of various risk environments. In developing countries such health information systems are badly needed. They may serve as guidelines for primary health care activities and could also enable the assessment of disease trends and predict disease outbreaks.

The second problem area

is directed to the social patterning of health and disease. The aim of *social epidemiology* is to characterise, quantify and analyse social stratification of health and health care, focusing on the mal-distribution and social inequity in health. In Sweden, distributional policy issues within the health care sector are increasingly addressed. The recognition of the key role of community participation for public health promotion is rather a lesson learnt from Third World experiences. Social epidemiology is also concerned with the social consequences of disease and prevention. Both quantitative and qualitative methods are used in data collection and in the analyses of social, cultural and gender differences in health.

The third problem area

where Swedish and development research share experiences concerns *evaluative research*. Epidemiological methods are essential in evaluations of preventive measures like community intervention and individual preventions within the health sector, as well as when assessing medical technologies and practices. Evaluations of health care measures are aimed at learning more about their efficacy, cost and ethics, adjusting health programmes accordingly and improving the implementation of public health measures. In a Third World situation in particular, planning for health must be based on population knowledge, including information regarding the non-users of health services. Some applications are especially relevant. These relate to mother and child health, nutrition and infectious diseases, and the evaluation of primary health care.

Aetiological studies

A proper understanding of the etiology of diseases and the natural history of disease processes – and of health – is essential for designing preventive programmes in public health. National and international studies reflect a wide range of research interests. Several of the studies specifically address the methodological problems of exposure assessment.

Sexual and reproductive health

Two generational analyses

Aetiological research of long-term effects of reproduction on the mother and her offspring is a demanding and pressing issue. How are the reproductive competence and behaviour of the women related to genetic factors, socio-economy, environment, lifestyle and health services? What possible long-term effects could there be in relation to pregnancy for the women, and how important could prenatal exposure be for the long-term health of the offspring? Two-generational analyses have been performed concerning pregnancy outcomes, delivery complications, low birth weight and long-term effects on risk of malignancy. The role of prenatal influence on chronic heart disease is questioned, and this study could make a contribution to this yet unsettled research question. At present, birth-cohorts of Västerbotten county 1955-1972 have been linked to adult screening activities in the MONICA and The Västerbotten Cohort. Birth characteristics and heritage have been analysed in relation to adult blood pressure, blood lipids, glucose intoler-

ance and anthropometric measurements. The findings so far indicate that impaired fasting glucose and impaired glucose tolerance are related both to heredity and low birth weight. We have previously shown that low birth weight is associated with hypertension in early middle age.

Another example of register epidemiology within the reproductive field is the application of the unique Swedish vital statistics since the 18th century. Studies have assessed maternal and perinatal mortality in high mortality settings by different definitions, time trends and risk factors, and also the decline of perinatal mortality in relation to intervention by midwives assisting at home deliveries. Further analyses to assess long-term survival of women in relation to bad obstetric outcome are in progress.

Pelvic pain during and after pregnancy

The prevalence of low back pain and pelvic pain (LBPP) during pregnancy has been reported by 25-90% of cases in different studies in the western world, whereas the prevalence among non-pregnant women is 20-25%. The aetiology is still unknown and the most prominent risk factor is experience of low back pain in a previous pregnancy. In collaboration between the Departments of Obstetrics and Gynaecology in Sunderbyn and Umeå, the prevalence and the risk factors for low back pain and pelvic pain during pregnancy have been investigated through a questionnaire with a prospective cohort-design. More than half of pregnant women developed LBPP during pregnancy and most cases reported both anterior and posterior pain.

Women with LBPP during pregnancy were characterized by higher pre-pregnancy weight and BMI, and end-pregnancy weight and BMI. Risk factors for LBPP were increasing parity, history of hyper-mobility and reported periods of amenorrhoea. LBPP demonstrate a negative impact on perceived health and sexual life during pregnancy. A great majority of pregnant women were on sick leave some time during pregnancy and the rate of sick leave was increased among cases with a high score of pain due to LBPP. Previous physical leisure activity was found to decrease the risk of LBPP during pregnancy. Almost half of women developing LBPP seek health care for LBPP during pregnancy [59].

The cohort has been followed up at six months and at 12 months after delivery, with a questionnaire investigating prevalent LBPP in the non-pregnant woman. The aim has been to investigate the prevalence of chronic LBPP, risk factors and specified outcome factors. Analyses have been performed and several manuscripts have been written [60, 61].

The quantitative research approach has been supplemented by qualitative in-depth interviews with pregnant women who have ongoing low back pain or pelvic pain, and their midwives at the open ward. The interviews have explored the implications of the pregnancy-related complication on the woman's experience of her pregnancy, her family-situation, the need for health care, and assessment of the provided health care during the pregnancy. Another qualitative study has also explored the health situation for women with chronic LBPP after pregnancy.

Studies aiming to investigate hormonal and molecular associations with LBPP during pregnancy are in the planning phase and these studies will be conducted in collaboration with colleagues in different specialities.

Chronic diseases in children and adults

Health in childhood and adolescence

Today there is substantial evidence to support the hypothesis that the atherosclerotic process leading to cardiovascular diseases (CVD) starts in childhood. Several international studies are trying to describe *CVD risk factors* in childhood and adolescence. The Umeå Youth Study, which started in 1989, is the first major Swedish study on this subject. The study is a prospective cohort study, using questionnaires, diaries, clinical and biochemical examinations, physiological tests, and medical registries. The study population comprises around 1000 adolescents in two age-groups, 14-and 17-years old, in the municipality of Umeå. In 1999 a 10-year follow-up of the initial study was performed when the subjects of the study were 22 and 25 years respectively. The main focus of interest in this study is to follow the development of the CVD risk indicators, to describe if dietary habits, physical activity and tobacco use have changed when the adolescents have left home to live on their own and to explore the social stratification of the CVD risk indicators.

Obesity and pain symptoms may be regarded as "*new morbidities*" in modern society and are becoming increasingly prevalent in adults and teenagers, however we know little about these health problems among younger schoolchildren. In an epidemiological study among 6-13 year old

children in Umeå we found that the proportion of children classified as overweight was 23% (doubled in 15 years). The prevalence of pain symptoms (headache, stomach-ache, backache at least once a week) was also 23%. In an ongoing study on mental health among children 9 and 12 years of age, the relationship between mental health on the one side and overweight and pain symptoms on the other will be explored further.

Nickel allergy is a common cause of hand eczema. Ear piercing usually induces this allergy. Preliminary findings indicate that straightening irregular teeth with metal braces containing nickel may prevent the induction of nickel allergy. A case-referent study of nickel-sensitised teenagers and referents has started. Nickel allergy is verified by testing, and previous use of brace and skin piercing is recorded. Preliminary results show that the prevalence of ear piercing among girls has not increased during recent decades. Among boys, however, there is a marked increase. Piercing on other locales than ear lobes has increased in both girls and boys. The prevalence of nickel allergy i our population is 15% among girls and 4% among boys. All data have been gathered and analyses are ongoing.

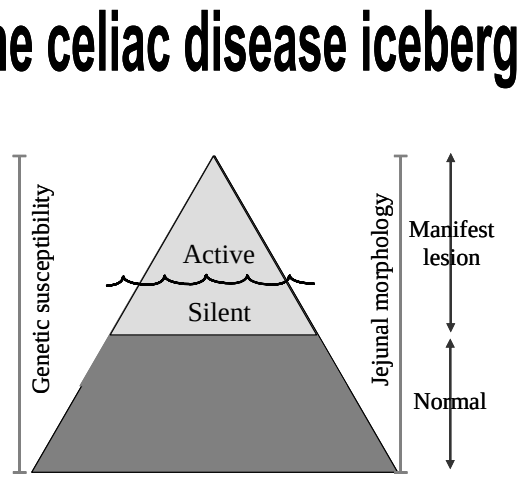
Celiac disease – a public health problem

Celiac disease, or permanent gluten-sensitive enteropathy, should be added to the public health research agenda worldwide. So far it is an often unrecognized contributor to ill-health although an effective treatment is available only by a change in diet.

We are responsible for a national incidence register of celiac disease in Swedish children, which has revealed an epidemic of celiac disease. We also take active part in efforts to reach consensus on national diagnostic criteria for the disease. A multi-centre incident case-referent study, combined with an ecological approach, demonstrated that the epidemic might have been avoided if all infants had been introduced to gluten in small amounts while still being breast-fed. In the international research community these findings have promoted a changed view on the aetiology of celiac disease from deterministic to multifactorial, thus fostering prevention initiatives.

Screening and diagnosis of celiac disease is facilitated by serological markers. Based on the multi-centre case-referent study we now evaluate the most promising serological markers, also considering the potential role of humane leukocyte antigen typing. We have also participated in a European collaborative study, suggesting revised diagnostic criteria for celiac disease.

In all populations approached for celiac disease screening it has become evident that a considerable part of the cases are unrecognized, however these are to a varying extent. Therefore the public health burden of celiac disease is often illustrated by an iceberg where the visible tip represents people with diagnosed disease, and the part hidden below the waterline are those so far undiagnosed.



Therefore it is debated if mass-screening should be recommended or not. We will contribute with further scientific evidence by a Swedish multi-centre screening programme for celiac disease, i.e. ETICS – exploring the iceberg of celiacs in Sweden. Included are 12-year old children born during the epidemic and post-epidemic years, respectively, to compare the prevalence in these cohorts both of symptomatic and so-called "silent" disease. This will further clarify whether primary prevention of celiac disease is possible, and whether mass screening for early detection and treatment is justifiable

[http://www.umu.se/phmed/epidemi/celiaki/etics/].

General screening among adults should also be evaluated, and the ongoing health survey in the county of Västerbotten would be an excellent framework for such an effort.

Moreover, we actively take part in promoting a European platform for research on prevention and treatment of celiac disease by integrating basic scientific knowledge in clinical applications and the food industry [http://www.cdeussa.com/].

Nationwide diabetes registration

In 1977 a nationwide incident case register covering *childhood diabetes* in the age group 0-14 years was set up in Sweden. The register is co-ordinated and continuously validated by the division of Paediatrics in collaboration with us. It forms the basis for population-based studies for the identification of genetic, immunological and environmental risk determinants for the disease.

In 1983 a similar nation-wide register on diabetes for the age group 15-34 years was initiated – the Diabetes Incidence Study in Sweden (DISS). New cases of type 1 and type 2 diabetes, and secondary diabetes mellitus as well as unclassified types of diabetes are reported by all paediatric, medical and endocrinological departments and public health centres in the country. Up to December 2003 8,300 cases (approximately 400/year) had been reported, of which 73% have been type 1 diabetes, 17% type 2 diabetes, 1.3% secondary diabetes and the remaining 9.1% unclassified.

For the period 1983-1998 the two diabetes registers were merged to enable estimation of the cumulative incidence of type 1 diabetes. Based on 11,751 cases, the cumulative incidence at 35 years of age was 748 per 100,000 for men and 598 per 100,000 for women. During the 16-year period the incidence of type 1 diabetes did not increase, while the median age at diagnosis decreased.

Through a record linkage between DISS and the nationwide Cause of Death Registry it has been possible to identify deaths among the patients and get information on cause of death. With an average follow-up of 8.5 years resulting in 59,231 person-years there were 159 deaths. Diabetes was reported as the underlying cause of death in 51 cases (32%), and as a contributing cause of death in another 42 cases (26%). The expected number of deaths based on the Swedish population was 65.1, thus the standardised mortality ratio (SMR) was 2.4.

The prevalence of complications was followed up in the 1987-88 year cohort. Out of 806 cases reported to DISS in 1987-88 the prevalence of retinopathy could be assessed in 627 cases and, out of these, retinal photographs were available in 523 cases. The prevalence of retinopathy 9 years after diagnosis was 39% (mild 33%, moderate non-proliferative 4.8% and proliferative 1.8%) . It was possible to assess Nephropathy in 469 cases and the prevalence was 6.6%. Compared with patients with type 1 diabetes, those with type 2 diabetes tended to have an increased risk of renal involvement.

Obesity is an increasing public health problem. Body mass index increased significantly between 1983 and 1999 in incident cases of type 1 and type 2 diabetes from 21.2 to 22.5 and from 27.4 to 32.0 respectively.

The occupational and living environment

Sick building syndrome

During 1994 the Office Illness Project in Northern Sweden was finalised. It comprised a questionnaire study of the Sick Building Syndrome (SBS) and skin symptoms related to Video Display Terminal (VDT) work among 6000 office workers. Using this study as a base, two case-referent studies were conducted – one focusing on SBS and another on skin symptoms in VDT users.

Taking potential confounding factors such as gender, age and psychosocial work load into account, there was an exposure-response relation between risk of SBS symptoms and ventilation rate. This gave strong support to the hypothesis that SBS-symptoms are caused by exposure to airborn chemicals.

Continuing research in this area is focusing on *chemical risk factors of SBS symptoms* and on the natural history of SBS symptoms and VDT related skin symptoms. A new project focusing on chemical exposure was recently initiated. In order to get information for the planning of a new case-referent study, a pre-study was conducted to find the variability in chemical exposure in office workers. The results showed that for most chemicals, the variability is greater between persons than among buildings and that men and women have different exposure patterns. The case-referent study is ongoing and performed in collaboration with The Swedish Polytechnic, Vasa, Finland.

With the aim of developing better care and action programmes for patients with the above types of “environmental illnesses” our studies are focusing on personal, psychosocial and environmental prognostic factors. We are working in an interdisciplinary project with people from Occupational and Environmental Medicine, Dermatology & Venerology, Dept of Sociology, Dept of Psychology, Family medicine and Dept of Odontology, all Umeå University. For comparison, a similar follow-up study of patients with a well-recognised environmental illness, hand eczema, has been undertaken. Follow-up results from patients with “hypersensitivity to electricity” have shown that

there is a large subgroup of patients with "VDT-related skin symptoms" and with quite normal findings concerning self-image and coping resources. The medical and social prognosis in this group is favorable in comparison with a smaller subgroup of patients with perceived "hypersensitivity to electricity". This subgroup has a larger number of symptoms that they attribute to electricity in general. In particular women in this group have deviant findings in self-image and coping resources. Our follow-up studies on patients with SBS shows that the level and severity of symptoms decrease over time, although nearly half of the patients claimed that symptoms were more or less unchanged after 7 years or more. Twenty –five percent of the patients were on the sick-list, and twenty percent drew disability pension due to SBS-symptoms at follow-up. The risk of having no work capabilities at follow-up was significantly increased if the time from debut to first visit at the hospital clinic was more than a year. The medical and social prognosis in this group is in between results from patients with "VDT-related skin symptoms" and patients with "hypersensitivity to electricity". Ninety-two percent of the patients were woman and eight percent were men at follow-up.

Indoor pollution in Ethiopia

The *effect of indoor exposure to biomass smoke* on children's risk of *acute respiratory infections (ARI)* is the topic of a study performed in collaboration with the Department of Community Health, Addis Ababa University, Ethiopia. Indoor air pollution has been suspected to contribute to the high ARI mortality rates in many developing countries, where biomass fuels and agricultural wastes are burned in open, non-vented fireplaces. The smallest children in particular, whose ARI mortality is the highest, can have extremely high exposure to cooking smoke in the home, since they spend more of their time with the mother and are often carried on her back while she is cooking. The study setting is the Butajira area in central Ethiopia, where the continuous demographic surveillance system of the Butajira Rural Health Programme (BRHP) provides an infrastructure for research. The study is a prospective case-referent study of ARI morbidity, with exposure assessment done in cycles for all households with children under five years throughout the eighteen month follow-up period. Nitrogen dioxide (NO2) is used as a marker for smoke and measured by passive sampling.

From the second quarter of 2000, pollution samples were collected every three months from each of approximately 3,300 households. Samples were brought to Addis Ababa for analysis within two weeks of sampling and data collection was completed in April 2002. Approximately 1,500 cases of pneumonia among the under fives have been found and treated in the Health Posts. Information about the pre-diagnosis period of the cases and approximately 4,000 incident referents have been collected from their mothers. Quarterly interviews with all mothers of children under five throughout the follow-up period have generated longitudinal information on exposure and a number of background factors relevant to the study. At the same time, samples of NO2 have been taken from the indoor environment and, in all, nearly 19,000 samples have been analysed in the laboratory in Addis Ababa. Data entry was completed in 2003. Data cleaning of this huge dataset took up much of 2004, leading up to complete material to used for the first of at least six articles in two PhD theses.

Oil exploitation and health in Ecuador

Oil is a major source of income for Ecuador and has, since the 1970s, been the engine of the economy. Most of the oil comes from the north-eastern part of the country, the Amazon basin. Since the beginning of the oil exploitation, foreign and national oil companies have extracted more than two billion barrels of crude oil from this region. In this development process, billions of gallons of untreated wastes, gas and crude oil have been released into the environment.

Indigenous children playing beside an oil contaminated pond

In the last few years, research has been conducted to assess the potential health impact of the oil pollution in communities living near oil fields. Increased risk of adverse health outcomes such as spontaneous abortions and cancer have been observed in the contaminated communities. Theses studies have been conducted using the

framework known as popular epidemiology. Local organizations have set the agenda of the research: they have been involved in the hypothesis formulation, consulted in each step during the study and responsible for the dissemination of the findings.

These findings have been used in a lawsuit initiated against one of the oil companies (Chevron Texaco) in Ecuador in October 2003. About 30,000 peasants and indigenous people claimed that the oil company had caused irreparable damage to the rainforest. On February 2005, during the ongoing court proceedings, Chevron Texaco organized a press conference in Ecuador to present the results of five reports by consultant epidemiologists who criticized previously mentioned studies. Selected quotes from the reports were later placed in full-page advertisements in Ecuador's main newspapers by Chevron Texaco. This led to a discussion among public health professionals on the responsibilities of epidemiologists, their accountability to the communities and the importance of judging the context.

Indigenous people marching in Cuenca during the II World Assembly of the People´s Health Movement

Swedish doctoral students´ experiences

Providing higher education for future researchers is one of the main tasks for universities. Within a few years many researchers who are active today will retire. It is therefore important to secure a coming generation of researchers.

A new research reform was established in 1998 in order to increase the rate of flow in postgraduate studies and to reduce the amount of time spent on research training. The time taken to complete a PhD should not exceed four years of full time study, and the prospective student should have funding for their studies and an individual syllabus. This puts more demands on universities, and the department's responsibility when accepting a new research student is emphasised. An important component that may have an impact on the amount of time spent on completing a PhD and on the coming generation of researchers is the students' experience of their working conditions.

An extensive pilot study was performed in Umeå in 1999, which included students accepted before as well as after the new regulation. Results show that interest in working at the university after receiving a PhD was about as great for women as it was for men, although significantly fewer women continue. Different aspects of insecurity (financial, doubts of one's own capacity, and about unwritten rules), difficulty in combining an academic career and a family, as well as negative experiences were some of the obstacles mentioned. The positive side of being a doctoral student that was described included intellectual development and a feeling that the work gave them a good chance for in-depth study in a special field. Many mentioned freedom, but often as a kind of Janus face (two-faced) freedom. They emphasised the advantages of freedom in doing research, but mentioned at the same time that this freedom also meant that there was no clear dividing line between work and leisure time, and the women in particular felt this stress.

An important factor for successful studies is the relationship between the doctoral student and his/her supervisor. Within the project a quantitative as well as a qualitative study, comprising doctoral students as well as supervisors at Umeå University, was carried out. The study shows at the same time as the framework for postgraduate studies in Sweden has become more homogeneous, the working conditions of doctoral students are still, to a considerable extent, heterogeneous. There are great differences, ranging from how far the doctoral student has actually got in his/her research programme at the time he/she is accepted, to widely different working conditions for different people in different projects or even within the same project. All this affects the research supervision, which in turn varies considerably from supervisor to supervisor, from department to department, and also between faculties and different kinds of projects. In general the study shows that doctoral students mostly find the research work itself interesting and that their supervisor showed great interest in their work. In spite of this, a large number of students, especially female students, had seriously considered giving up their studies. One of the most common reasons

for these considerations was to do with the relationship with the supervisor. Both doctoral students and supervisors felt stress regarding bringing the thesis to a successful close, and the supervisors who were interviewed expressed thoughts about how much they should intervene and either 'apply the brakes' or 'step on the gas'. Nevertheless, the pleasure of supervising stood out in the interviews with the supervisors, and research supervision was quite often described as "exciting", "developing" and "instructive".

Even though a large number of PhD-students seriously considered giving up their studies, not all of them did. Some students, however, take the step and leave the research education training programme without having defended their thesis. Even though every doctoral student's commitment to the programme is a huge undertaken, both for the student him/herself as well as for the department and the university, there is limited knowledge about the reasons for non-completion. A qualitative study about non-completion among PhD-students is ongoing, exploring the students' perspectives and experiences when leaving the research education training programme.

Social epidemiology

Unfair distribution of health and the prerequisites for health between different strata are of central concern for social epidemiology. From this perspective a number of problem areas may be identified which have a special bearing on social epidemiology. Some may also respond to the international health policy research agenda being developed to meet emerging health problems and the ongoing epidemiological transition.

Public health and the epidemiological transition

Many developing countries lack systems for the routine registration of vital events on a nationwide basis. Thus local community-based population surveys are often needed to understand public health needs and trends.

Collaboration between investigators in various countries, not least through the *INDEPTH network* (of which our collaborating field surveillance sites in Ethiopia, Vietnam, Indonesia, Nicaragua and South Africa are members) continues. One methodological challenge has been further work on determining cause of death retrospectively using the verbal autopsy technique. Although the verbal autopsy (VA) approach is well established, it has relied on a lot of doctors' time to interpret results. We have now developed a computer model for VA interpretation using Bayesian probabilities, and refined it further at an international workshop in Umeå during 2004.

Work on collaborative surveillance of NCD risk factors during various stages of the epidemiological transition in Ethiopia, Vietnam and Indonesia, in collaboration with the WHO/NCD surveillance programme, has continued.

Our collaboration with the Community Health and Nutrition Research Laboratory (CHNRL), Gadjah Mada University Yogyakarta in the Purworejo Demographic Surveillance Site (DSS) has played an important role in providing accurate demographic and epidemiological data for evidence based policy making at district level. Results from the demographic surveillance and different studies conducted in collaboration with us have been utilized for district health planning during the last 10 years, especially in the field of mother and child's health and nutrition. Along with the epidemiological transition, our collaboration with the Purworejo DSS has been expanded into the field of non-communicable disease (NCD) and its risk factors.

Together with the CHNRL Gadjah Mada University Yogyakarta, and WHO, we are monitoring trends in important risk factors for non-communicable diseases over a 3-year period in Purworejo District during 2001-2004. Baseline age validation and NCD risk factor data collection, including smoking and alcohol consumption, physical activity, body mass index, waist hip ratio and blood pressure was conducted during the period September 2001 until February 2002. Verbal autopsy was conducted for all death cases identified in regular surveillance since 2000.

The baseline data showed a high prevalence of smoking (53.4% for males and 2.2% among females). Older females used more smokeless tobacco ("nyusur" in Indonesian). The overweight prevalence was as high as 20% in females, and women were considered to lead a sedentary lifestyle. Both smoking and obesity are considered as major risk factors for many non-communicable diseases. This was confirmed by the verbal autopsy data which showed cardiovascular disease, stroke and chronic obstructive pulmonary disease as the three leading causes of death in the year 2000. The results clearly showed the multiple burdens of

NCD risk factors among the Indonesian population. Future research should be directed toward tailoring various community interventions to reduce the risk factor burden.

A 3-year grant from SIDA/Sarec for bilateral collaboration with South Africa has also facilitated further networking to explore surveillance methods and transitions in public health. This has enabled us to deliver courses at the University of the North (an historically disadvantaged institution in South Africa) in methods for field research and epidemiology, in close collaboration with the Dikgale and Agincourt field sites.

In Ethiopia, the overall objective of the ***Butajira "field laboratory"*** has been to run a continuous Demographic Surveillance System (DSS) for registering births, deaths and mobility in a defined population of initially approximately 30 000 since 1987. Currently work is underway, not only to assess the current situation, but also to evaluate longer term trends. All of these tasks can only be undertaken on a scientific basis if the background data of the population are known - for which the field laboratory concept for population surveillance is absolutely crucial. In many ways the area chosen is representative of much of Ethiopia - with a mix of ethnic, religious and social groups in ten different communities. Better understanding of health in these communities provides the impetus and platform from which interventions can be launched and evaluated. In demographic terms, it is clear that the area is undergoing considerable change, with increasing life expectancy and net movement towards the urban centre of Butajira town.

In 2004, the total population of the DSS sample grew to 50,000 individuals, with an average annual growth rate of approximately 3.5% since 1987. The changes were 1,329 births, 297 deaths, 1,718 inmigrations and 213 outmigrations. Divided by area, the rural highland areas experienced a 3.9% population growth, the rural lowlands grew by 5.7% and the urban area by 9.2%. Crude mortality was 6.4/1000 persons at risk in the highlands, 7.9/1000 in the lowlands and 4.5/1000 in the town. Crude birth rates were 28/1000 persons, 35/1000 and 23/1000 in highlands, lowlands and urban areas respectively.

Overall, the picture of inequality between rural and urban areas persists. Unequal living conditions and access to services create differences in even the most crude public health indicators. The same pattern has been seen since the first year of operation of the Butajira DSS, without any changes except in short term fluctuations.

An increasing number of specific research problems are being addressed by external projects using the study base as a platform and research infrastructure. In addition, every year a number of post-graduate trainees from Addis Ababa University's Master of Public Health programme undertake field studies in the area. In 2002 the BRHP entered into a new three-year cycle of Sida/SAREC support, if with some delay due to administrative problems. Of the new activities included in this cycle, a linkage between the newly opened hospital in Butajira town and the BRHP population database has been initiated. This is hoped to provide hitherto unavailable information on health care utilisation as well as on morbidity in the population, while at the same time providing services, both technical assistance and vital statistics, to the public health care system in the district. During 2004, we introduced a new approach to quality assurance in the demographic surveillance. In place of the previous, usually disruptive process of rechecking on the database by recurring census, we are trying out a stepwise recheck of first houses and then their inhabitants. The process, tentatively called *reconciliation*, is planned to be repeated annually. This regularity and the short time intervals should reduce the amount of error detected to a level, where the whole process can be incorporated in routine activities.

A study of *Women's health and Domestic violence* was performed within the BRHP infrastructure in 2001. This included qualitative components exploring attitudes and perceptions about domestic violence, a cross-sectional survey of the prevalence among women in reproductive ages and its association to mental health, and a sub-study of the association between exposure to domestic violence and the child survival. The study followed the core protocol and questionnaire used in a WHO multi-country study performed in different parts of the world but also included an additional part for screening of mental disorders (CIDI). The project is a collaborative venture between our Department, the Department of Psychiatry at Umeå University and the Department of Community Health in Addis Ababa. The basic results were presented in a National Report in 2003. Further analyses of the data focusing on domestic violence and mental health constitute the basis for a PhD project by an Ethiopian collaborator. In November 2005 the WHO Multi-Country Report was launched and the

results from the Ethiopian cross-sectional study were included together with nine other countries (Bangladesh, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia and Montenegro). The multi-country is unique for its consistent methodology making the results comparable across sites. The study confirmed a large variation in both lifetime and 12 month prevalence of violence. The lowest figures for lifetime prevalence of physical and/or sexual violence was observed in urban Japan (15%) while the highest was found in rural Ethiopia(71%) and Peru (69%).

In 1999 at study on domestic violence was performed within the structures of the CHNR-L demographic surveillance site in Indonesia. In "the SEHATI study"a representative sample of 765 women who were selected to participate in a longitudinal study on nutrition during pregnancy consented to participate also in a specific sub-study on women's health and life experiences, focusing specifically on domestic violence. The results indicated an overall lifetime prevalence of physical or sexual violence of 27%, with a higher prevalence of sexual than physical violence. This study constitutes the basis for further analysis and the framework for a PhD project for one of the Indonesian collaborators. The project is performed in collaboration with the Rifka Annisa Research & Training Center (RA-RTC) and Gadjah Mada University. The aim of the project is to contribute to a better understanding of women's experiences and perceptions of domestic violence in Indonesia and to identify feasible preventive strategies at the community level, especially focusing on men's involvement as health promoters for prevention.

Since 1986 the ***Kagera AIDS Research project (KARP)*** has followed the magnitude, the community response and the social impact of the HIV-epidemic in the Kagera region in Tanzania. A baseline survey revealed an overall prevalence of HIV-infection varying from 24% in the urban area to 0.4% in the most remote rural area. The population in Kagera formed a study base for both quantitative and qualitative studies to better understand the epidemiological and socio-anthropological dynamics. The first thesis, in 1994, included prevalence and incidence estimates, interaction between HIV-1 and syphilis infection, and also in-depth behavioural and socio-geographical studies with evaluation of knowledge, attitudes and perceptions regarding HIV-infection risks. The longitudinal design of the project has allowed population monitoring of prevalence and incidence trends. In the late 90's, studies from the urban area indicated a decline in HIV-infection prevalence among young adults and follow-up studies of incidence later supported these results. Data from some of the rural areas also showed a declining trend in previously medium and low prevalent areas. The trend analyses were presented in a thesis in 2001. Parallel to the epidemiological monitoring, socio-anthropological studies were performed addressing the stress of AIDS, coping mechanisms, gender oppression and behavioural change. Socio-linguistic research contributed to the analysis of the linguistic discourses and metaphors relating to the epidemic presented in a thesis at Leiden University, Holland in 2001.

The encouraging results of a declining trend have been discussed based on qualitative data about social, cultural and sexual behavioural aspects of the observed changes. The specific role of Non Governmental Organisations' preventive efforts targeting youth was the focus of a Masters thesis [2003:8]. These studies suggest major behavioural change that could be explained by the severity of the epidemic and the following cognitive and emotional reactions, but also by the diversity of intervention activities that have been on-going in the area during a long period of time. However, the results also indicate a complex situation where the changes differ among different social strata.

The epidemic is still a great public health problem in the region and in Tanzania as a whole. The longitudinal nature of KARP is therefore utilized for continued monitoring of the direction of the epidemic and for focused sub-studies evaluating the role of interventions to better understand the promoting factors for change. We continue to follow the epidemic in the urban area and also re-visit areas not studied since 1987. The focus is to assess if and why they have been protected from further spread. The recent cross-sectional study in the urban area revealed socio-economic and gender inequalities in the HIV prevalence which will be further analysed and compared with previous results. The role of social capital in

explaining the observed changes and as an entry point for interventions will be explored in a coming PhD project. By also testing and evaluating participatory intervention strategies specifically targeting the youth the project also hopes to contribute in developing culturally acceptable intervention tools.

Some of the researchers in Tanzania

In Kagera a new field organisation has been set up in close collaboration with the Regional Hospital. A group of new field staff have thus been trained and a project co-ordinator is employed to take overall responsibility for the planning and implementation of the field work. A KARP website has been developed where the project is presented and the main activities and results summarised (http://www.muchs.ac.tz/kageraproject/index.html)

Nicaraguan society has been characterized by rapid social change during the last twenty years; political unrest; a dictatorship overthrown in a revolution followed by civil war.

After the revolution in 1979, the Sandinistas implemented many changes such as the agricultural land reform, improved health access, improved education through national education campaigns, compulsory military service, and strengthened community participation. While people were still adapting to these social changes, new political events took place in 1990 when the National Coalition was elected to power, reversing changes that were particularly related to popular participation. Society was once more very rapidly transformed, affecting the social structure. Moreover, in 1996 the Liberal party came to power introducing social changes that further deepened the social crisis; the already poor conditions of most Nicaraguan families became worse, people seemed to lose confidence in political parties, and this disillusionment was reinforced by the government corruption [ref Herrera et al].

Even though the political situation have been stabilised, the gap between rich and poor is widening and, the political turmoil continue with, for example, strikes lasting for months affecting the health sector and transports (2005/06). Nicaragua has also been devastated by natural disasters; volcano eruptions, earthquakes and hurricanes, and the hurricane season during the autumn 2005 was the worst for 150 years. Poverty affects more than two thirds of the population, and Nicaragua has been ranked one of the poorest countries in the world for decades. The high unemployment leading to migration both within Nicaragua and abroad is affecting the society at large, causing instability and insecurity. It has detrimental effects on children who are often left alone or with relatives at long periods of time while parents go to other places to find a job.

Rapid social changes in Nicaragua

Nicaraguan society has been characterized by rapid social change during the last twenty-five years. Even though the political situation have been stabilised, the gap between rich and poor is widening and, the political turmoil continue with, for example, strikes lasting for months affecting the health sector and transports (2005/06). Poverty affects more than two thirds of the population, and Nicaragua has been ranked one of the poorest countries in the world for decades. Nicaragua has also been devastated by natural disasters, and the hurricane season during the autumn 2005 was the worst for 150 years.

Demographic and Health Research in León, Nicaragua

is the joint effort of the former Reproductive and Child Health, in collaboration with Epidemiology and Public Health Sciences, Umeå and International Maternal and Child Health (IMCH),

Uppsala university, and Mental Health project1. The cooperation has entered a new phase where the main objective is to create a local environment for sustainable research and training in the area of epidemiology and public health. This longstanding collaboration has now established a group of Nicaraguan researchers in the area of epidemiology and public health with completed MPH and five with PhD degrees.

The Centre for Demographic and Health Research (CIDS) was set up in 2003 with the objectives to create a permanent platform for field epidemiology training at Masters level and for postgraduate studies, primarily directed to students from the Central American region. Moreover, it will create links to other research programmes and establish conditions for the development of research intervention strategies towards any public health problem. Three sub-units has been constituted, mental health, reproductive health and gender, adult, child and demography, forming platforms for research taking advantage of the demographic surveillance.

The overall aim of the research activities, as prioritised, has been to generate new knowledge in the areas of sexual and reproductive health and child health; to communicate these results to the community, to policy makers and planners and to other researchers; and to promote initiatives which could lead to better public health in Nicaragua - and in so doing, provide research training to Nicaraguans interested in public health. The extensive contacts with local stakeholders, including health services (SILAIS-MINSA), municipal authorities, and community organizations (Movimiento Comunal) have been paramount to achieve this.

The research performed and planned in the CIDS has reached different levels of maturity. Research has already been performed in the areas of maternal and child health, adolescent sexuality, suicide, accidents, domestic violence and effects from violence on reproduction and child health. The knowledge gained on prevalence and mechanisms of action allows for planning of interventions in health services research, prevention of accidents, suicide and teenage abortions, STDs, HIV infection and for prevention of dengue haemorrhagic fever.

Monitoring of risk factors is another other identified research area. For chronically diseases like cardiovascular diseases and cancer little is known of the prevalence and trends for risk factors like smoking, poor physical activity and obesity in the Central American area. For CIDS this area of research opens the prospective of describing whether the Nicaraguan society as well as many other developing countries is going through the transition from a morbidity pattern dominated by infectious diseases towards one of chronic diseases. If this is the case the health prevention and promotion has to develop to meet these challenges. Piloting for a survey on chronic diseases (STEP) is presently underway.

Children caring for siblings

An ethnographic study on the life situations of children working as caretakers for siblings in deprived areas in different settings in León, Nicaragua is on-going. The aims are to identify, describe and analyse the life situation of these children, based on their own perceptions and experiences. Apart from looking after their siblings these children performed all daily routine chores in their homes. The majority of them did not attend school. We found that the care-giving role imply a narrowing of life options in a long-term perspective. Early on these children achieve essential life skills but as they grow older they tend to fall behind due to their limited social network and lack of basic education. However, the children themselves were satisfied and proud to be trusted as caretakers and felt useful in contributing to their families' livelihood. Since school attendance was found to be one of the problems for these children a study on school drop outs and repetition has be conducted and will be analyses during 2006.

[1] The project *"Mental Health in Nicaragua"*, has been ongoing since the late 1980s as a collaborative project between the division of Psychiatry, Department of Clinical Sciences Umeå University and the Department of Psychiatry, León University.

Pathways to suicidal behaviour

A study exploring the motives and processes related to *suicidal behaviour* among young girls was conducted in *León, Nicaragua*. Individual in-depth interviews were performed with eight girls between 12 and 19 years admitted to hospital for suicide attempts. A model exploring pathways to suicidal behaviour was developed showing that family dysfunction, absent fathers and lack of integration in the society were some of the structuring conditions that lead to emotional distress. Abuse, deaths in the family, break-up from boyfriends or suicide among friends acted as triggering events. A striking finding was the apparent narrative competence among the girls. Based on our findings, preventive strategies are suggested, indicating that suicide prevention programmes for young people must offer support from professionals who are independent from the family and social network of the adolescents and offer a trusting environment which makes use of the resources available to young people (Herrera et al 2005 Soc Sci Med) .

"Home alone": children caretakers in León, Nicaragua. Children's participatory action research through communication

Together with the NGO CrozzCom from Barcelona the Home Alone (HA) study was initiated in 2004 and developed from the study of caretakers. The project aims to - by making it possible for home-working children to give voice to their situation - create awareness and put into action changes and interventions suggested by the children themselves. A mix of methods and tools are used to facilitate the children's participation throughout the whole research process, from data collection and analysis, to dissemination and the use of results. Photography, video, story telling and advocacy are central elements in the methods Child Photographer, Child interviews and Testimony video. Three workshops with a group of 32 children has been organised, and individual video interviews are on-going. A photo exhibition and a video from the project are to be launched in 2007.

Birth registration

A new human rights intervention with a research component has been launched 2006 at CIDS. The Convention on the Rights of the Child states in its Article 7 that the child shall be registered immediately after birth and shall have the right from birth to a name, the right to acquire a nationality and, as far as possible, the right to know and be cared for by his or her parents. In Nicaragua less than less than 39% of children under five years of age are registered. In the surveillance site of CIDS the households will be screened for birth registrations of the around 18 600 children between 0-15 years of age are living in the 12 000 households. The data base holds information on socio-economic status of all individual households, as well as educational level of all persons in the households. Those children without legal documents of birth will be provided the possibilities to register. This will be made in collaboration with local authorities and NGOs, preferably at no cost for the children and their families. Through the monitoring we will be able to identify which types of households are most likely to have unregistered children and to help target areas in León for awareness campaigns of the necessity to register children. It will also make possible to explore the relationships between birth registration, discrimination, malnutrition, mortality and the ability to access other services and rights.

Reproductive health and gender

A follow-up of the cohort of mothers and their children screened for intimate partner violence are presently conducted. A cross-sectional study on STD, prevalence and special emphasis on gender norms and attitudes and sexual violence will be done 2006. A pilot study on strengthening the health sector response to identify and supporting women victims of IPV is planned for 2006. Studies addressing masculinity and IPV are in preparation.

Public health and social change

Epidemiology can evaluate the impact of socio-economic and political changes in society on health. Active epidemiological surveillance of infant and under-five morbidity is one indicator of socio-economic change, and has been found useful in distinguishing between sub-groups of the population which may differ in vulnerability.

The largest death toll during periods of crisis and warfare in low-income countries is usually among infants and children under five. Based on bilateral research collaborations with universities in Indonesia and Vietnam we are studying the consequences of rapid social and political change on the health of women and children.

The population of *Vietnam* appears to be undergoing rapid social and economic changes, following the war period and also in the current climate of "Doi Moi" reform. An epidemiological field laboratory called FilaBavi has been in operation since 1999 in the Bavi district, some 60 km from Hanoi. It's purpose is to give a perspective on a local population's demographic and health status as well as monitoring on-going changes. FilaBavi is a joint effort with the Vietnamese Ministry of Health, the Hanoi Medical University and the Health Strategy & Policy Institute, in collaboration with ourselves and IHCAR at the Karolinska Institute.

Within the frame-work of the FilaBavi surveillance site, a project on reproductive health has been ongoing since 2004 in collaboration with Vietnamese counterparts. Vietnam is enjoying comparably low maternal and infant mortality rates in relation to the available health budget. The project aims at investigating the underlying factors and mechanisms resulting in the current situation. Qualitative data has been collected investigating the perception of risks during pregnancy among pregnant Vietnamese women and health staff. Data from the FilaBavi database will result in a population-based study on pregnancy-outcomes. Perinatal mortality and near-miss cases will be investigated through a prospective case-control study exploring possible avoidable deaths and obstetrical complications using an audit-protocol.

Public health and equity

In the public health field, social epidemiology is focusing on evaluation of public health programs, with special emphasis on *equity* questions, in order to promote development of strategies that will help to diminish the health divide.

Participating in international health networks

The year 2000 has passed and the goal for ''Health for All'', reiterated in the Alma Ata conference 1978, is still distant. While some considerable gains in health status have been achieved such as in life expectancy, infant mortality, and control of certain communicable diseases, there have been setbacks. Growing inequities within and between countries are documented. AIDS, tuberculosis, and other diseases are far from being controlled. The role of the state is being marginalized and the power of multinational companies is increasing. Many see economic globalization as a severe threat to the health of both people and the environment.

To oppose these trends, the People´s Health Movement (PHM) was created in 2000 (www.phmovement.org). The PHM is a coalition of people's organizations, civil society organizations, NGOs, social activists, health professionals, academics, and researchers that aim to re-establish health and equitable development as top priorities in local, national, and international policy-making (3,4).

During these years, one of the main roles of the PHM has been the identification of common issues among the diverse participants and to propose actions. Privatization of health services, the impact of conflict, and the introduction of trade agreements that are not pro-poor are simply three of the global concerns. To raise awareness about international health policy issues such as the appointment of the new Executive Director of UNICEF (5) or the involvement of the Lancet´s owner and publisher with arms trade (6) is another main activity of the PHM.

In July 2005, researchers from the UISPH participated in the Second World Assembly of the PHM in Cuenca, Ecuador. Together with 1492 people coming from 82 countries around the world, ways to achieve a socially and economically just world in which peace prevails; a world in which all people, whatever their social and economic condition, gender, cultural identity and ability, are respected, are able to claim their right to health

and celebrate life, nature, and diversity were discussed in different events and activities

Viewpoints on intimate partner violence with focus on gender and on the period of pregnancy - a Swedish study

In an ongoing project from Umeå, both quantitative and qualitative methods have been used with the aim to study different viewpoints on intimate partner violence (IPV). The main focus is on gender and on the period of pregnancy and childbirth and the study has been carried out at different places in the north and middle of Sweden.

Midwifes working at the antenatal care in Västerbotten, were asked about experience, knowledge, attitudes and routines regarding violence against pregnant women. At the time for the study, IPV was not a part of the antenatal care agenda and although midwives were very knowledgeable about and sensitive towards pregnant women and their needs, they still rarely revealed the occurrence of violence and were probably disclosing only a fraction of the cases. Guidelines about asking all pregnant women about violence were, during the year 2005, initiated in the antenatal care in Västerbotten and knowledge from this study has been included in the development.

Professionals working with men inclined to violence were interviewed at two prisons and at two centres for men. The intention was to explore professional discourses regarding IPV. Despite the professional's good intentions of building an alternative masculinity as a way to counteract men's violence, their discourses might instead to work in the opposite direction such as reproducing gender stereotypes and even omitting important relational topics in the programs.

Women that had been subjected to IPV during their pregnancies were interviewed. They described relationships with severe violence where they balanced between hope and despair. The women had several strategies to adapt in everyday life while they also offered resistance to the violence and tried to cover up, mostly even when meeting the midwife at the antenatal care.

Men that had been reported as violent against their partner and had joined treatment programs were interviewed as a pilot study. A continuation with more interviews is planned in the near future.

Violence research in Tanzania

The initial results on prevalence, health outcomes and women's responses from the Multi-country study on womens's health and domestic violence against women was recently presented. The study was based on surveys in 10 countries, one of them the United Republic of Tanzania. Based on sampling of 2200 households in the capital Dar es Salaam and in Mbeya the prevalence of physical, sexual and physical or sexual violence or both was estimated at 19%, 12%, and 27% respectively in Dar es Salaam and 16%, 9.4% and 22% respectively in Mbeya. During 2006 three new projects was initiated within the same field. All three studies will be performed in Ilala district in the southern part of Dar es Salaam. One of the projects aims at estimating the prevalence of rape and describes socio-cultural factors and responses to rape and rape victims to get information to be able to develop preventive political and community strategies as well as improvement in health care. The second project is looking at health workers' and community groups' perceptions about intimate partner violence and their roles in care and prevention aiming at exploring health workers' and community groups' perceptions about intimate personal violence, their roles in care and prevention and to suggest relevant intervention strategies within the health care organizations as well as at the community level. The third project focuses on child sexual abuse with the overall aim to contribute to a better understanding of the magnitude, community's perceptions, socio-cultural factors that perpetuate its occurrence, and the perceived roles of different community groups in handling the problem.

Evaluative research

Evaluations are a basis for health planning and management. Epidemiological methods are essential in evaluations of preventive measures like community interventions and individual prevention within the health sector, as well as when assessing established medical technologies and practices.

Social patterning of prevention

In order to reduce the high incidence of cardiovascular diseases and diabetes mellitus, the County Council of Västerbotten decided to start an intervention programme in 1985. Since there were no Swedish prototypes for this type of intervention, a model adapted to Swedish conditions had to be created. It was developed in the municipality of Norsjö and was later disseminated to the 14 other municipalities in the county, forming the Västerbotten Intervention Program (VIP). During 2005

altogether 7 141 persons at ages 40, 50 and 60 participated in VIP. With these included, 99 497 health screenings has been performed. Almost every participant has filled in a questionnaire and the VIP data base now represents one of the worlds largest of its kind. Most of the participants have donated blood samples to be stored in the Northern Sweden Medical Biobank. So far (December 2005) 20 536 people have participated in a 10 year follow up. The VIP programme was designed to combine a population strategy with efforts to meet, examine and give advice individually to people when they were 40, 50 and 60 years of age. Using the *primary care system* as a partner, the programme carried out systematic risk factor screening and counselling by its family medicine providers at the same time as the community intervention programme used strategies to raise public awareness.

During 2005 the participation rate was 68,1% (7 141 out of 10 481 invited) compared to 63 % 2004. Previous studies have confirmed that there was no social selection bias when comparing participants and non-participants. During the last decade, VIP data has been actively used for epidemiological research, development of new preventive methods in primary care, health economic evaluations, as well as for county council health planning purposes.

With regard to primary care oriented epidemiological research, focus has been on developing new preventive methods to integrate prevention in the everyday practice. Five parallel research projects are addressing these issues:

- One is focusing on *early predictors for type 2 diabetes*, using VIP data and primary care records. This prospective case-referent study includes 237 cases, who did not have diabetes at the VIP screening, but developed the disease and had it subsequently diagnosed after a mean time of 5 years, and 473 referents who were free from diabetes during an observation time of 8 years .The associations between biological markers, socioeconomic factors and life style and type 2 diabetes are evaluated. The study aims to contribute to the knowledge on early perturbations during the course of type 2 diabetes, to develop methods adoptable in every day clinical practise for identifying individuals who are at high risk for future type 2 diabetes and also methods for prevention and treatment of type 2 diabetes. This study has been extended to also analyse the prevalence of Metabolic Syndrome (MetSy) in VIP Panels, indicating snus-users to carry an increased risk to develop MetSy.
- The second research project is trying to bring us more knowledge about why middle-aged women seem to swim against the stream and do not *quit smoking* to the same extent that both younger women and younger and middle-aged men do, as well as trying to explore what ex-smokers report to be success factors enabling them to quit smoking. Of specific interest in this research projects is to explore the possible role for snus in facilitating for middle aged smokers to quit. Preliminary data indicate that the role of snus might be less big than the tobacco producers have claim. The expectation of this research is to add knowledge that can support general practitioners in their ambition to reduce risk for AMI and chronic obstructive pulmonary diseases.
- A third project tries to assess who, among *hypercholesterolaemic individuals* (s-cholesterol > 8.0 mmol/l) without CVD, really need pharmacological lipid lowering treatment. By developing a new routine for tracking familial hypercholesterolemia and applying this routine to VIP procedure, it might be possible to identify persons and families at high risk for early onset of myocardial infarction. It is well known that pharmacological lipid lowering has a great efficacy. However, less is known about the effectiveness of the pharmacological lipid lowering treatment. Thus this project will also analyse the treatment in terms of "who gets treated". Socioeconomic patterns of prescribed treatment will be explored and analysis will be made assessing if priority is given to people with a heavier risk factor burden – as Guidelines imply. Preliminary data indicated that the most of the implementation of Lipid lowering Guideline in Primary Care remain to be done.
- A forth project is aiming at *developing a risk equation*, predicting the 5 and 10 year risk for an individual to develop CVD (stroke or AMI), when taking both traditional and social factors into account. Health counselling is often quite challenging, and its outcome depends on the interaction between the staff and the individuals. It is well known that risk scores based on CVD prevalence from the 1970s, do not fit particularly well. With this research program it will be possible to develop more accurate estimations based on data from the 1990s. For the present, a core predictive

model on myocardial infarction and another model on stroke is about to be developed, ending up with one (validated) risk equation for men and one for women for both AMI and stroke. Preliminary analysis indicates the composite mortality risk of AMI to be much lover in the Västerbotten population than previously predicted, implying that Guidelines might have to be adjusted accordingly.

- A fifth project is focusing on the upcoming obesity epidemics, reported worldwide. Our research group would like to contribute to the theoretical and methodological development of new public health strategies to prevent obesity and overweight.. Instead of looking at the obese and study possible strategies to reduce weight, we rather dentify and characterise those who manage to maintain weight in middle-age during a 10 year period. To do this we have to explore the meaning of '*weight maintenance*' and the efforts involved for those who maintain their weight during the 10 year period and to study the distribution of these perceptions and attitudes towards weight maintenance among future VIP participants.

Since the mid 1990s, the *"Northern Lights Working Group"* research collaboration has been developed between our department and Bassett Research Institute, Cooperstown, New York and the Department of Preventive and Community Medicine, University of Rochester, New York . The collaboration was initially focused on comparing small scale community interventions in Sweden and the US. The main purpose of this collaboration is to explore the possibility of learning more by comparing programme outcomes between different countries. The collaboration has continued in a between-country comparison regarding self-reported health and CVD risk factors and in a 10 year study comparing obesity development in a US and a Northern Sweden panel. As a continuation of this work we during the coming years will join forces with regard to weight maintenance research.

The role of self-rated health in public health evaluation has been discussed on the basis of experiences from the Norsjö programme. One study focused on changes in risk factor load and self-rated health during the ten year intervention period, 1986-1996, with the MONICA area as the reference. The study supported previous results of an overall risk factor reduction for this period and showed an accompanying positive development of self-rated health. Preliminary analysis from the reference area gave additional support for an intervention effect. Qualitative research interviews supplemented the analysis and enabled a discussion about the influence of health related norm systems on self-rated health and of how attitudes and feelings towards the health programme can be linked to the outcome. The results indicated that the unintended consequences had not taken precedence over the intended risk factor reduction but that the influence of self-rated health differed for men and women and for educational groups.

The incidence registration of stroke, within MONICA and VIP, formed the basis for a case-referent analysis of perceived health as an effect modifier in predicting disease outcome. In this study, self-rated ill-health independently increased the risk of stroke, specifically for men, and the interaction effect between self-rated health and biomedical risk factor load was greater for men than for women. The influence of self-rated ill-health on the risk for stroke was greater for the better educated with high risk load than for the less educated. These results underscore the importance of including a gender and a social perspective in discussing the role of self-rated health as a predictor for disease outcome.

A collaboration with the Basset Research Institute resulted in a comparative study of determinants for self-rated health between participants in the Västerbotten Intervention Programme and a "sister programme" in the U.S, the Otsego Healthy Heart Programme. The results suggested that cardiovascular risk factor burden is a much stronger predictor of self-rated poor health in adults in the U.S. than in Sweden, especially for the less educated.

We are also involved in the MONICA-project, under the auspices of WHO for the systematic monitoring of cardiovascular diseases. A follow up of all persons screened in 1986, 1990 and 1994 was performed during 1999 comprising more than 5,000 individuals. Together with a new cross section in 2004 we now have a series of five repeated random cross-sectional studies and three panels (1986/99, 1990/99 and 1994/99) with possibilities to differentiate between cohorts and to generate development of cardiovascular risk indicators. By this fifth cross-sectional survey from 2004, the observation time for studies will be extended further. The follow-up of individuals participating in the previous MONICA cross-sectional surveys will allow for further analysing the role of perceived health in predicting future risk factor load and the reverse, and to study the interaction with socio-economic factors.

A more health-oriented health service

Assessing public health policy

The Swedish national public health policy has now taken its first step to being put into practice. The aim is to strengthen health promotion and disease prevention initiatives, contribute to a reduction of health inequalities between groups and make health consequences an important aspect to consider in all decision making at every level of society. One of the new goals, "*Health and medical care that more actively promotes good health*", underlines that services need to be much more health-oriented, which implies a shift in perspective towards a holistic view of people's problems and a transition to a more health-promoting and preventive policy.

Our department was actively involved in the process of developing a national public health policy, and is now actively supporting the implementation process. In collaboration with the National Public Health Institute, we have launched a research program focusing on different aspects of how the health care system can be more health oriented.

During 2004, the collaboration between our department and the department of Community Medicine at the County Council, as well as between our department and the Public health institute, was further developed. The four postgraduate research scholarships supported by these collaborations are focusing on four different topics. The first is studying health economy in relation to health service home visits among elderly, the second will scrutinize whether strengthening of social capital can be useful for health promotion in the population, the third will focus on teenage girls and young women and their stress-related and psychosomatic problems, including pain and body image and the fourth will mainly analyse obstacles and possibilities among health professionals in the process of developing health and medical care that more actively promotes good health.

Screening for breast cancer

Few secondary interventions have been as carefully evaluated, and perhaps therefore as questioned as mammography screening. To evaluate its benefit on breast cancer mortality, an overview of the four randomised controlled trials (RCTs) that have been performed in Sweden was administered by our department. The four cohorts consisting of 282,777 women aged 40-74 years at randomisation have been followed-up three times, through 1989, 1993 and 1996, and a final follow-up through 2004 is ongoing. The last follow-up through 1996 showed that with a median trial time of 6.5 years and a median follow-up time of 15.8 years there was a significant 21% reduction of the breast cancer mortality in the invited group. Based on the results from the RCTs the National Board of Health and Welfare in 1986 issued guidelines for mammography screening. All county councils in Sweden invite women aged 50-69 to mammography screening every second year and about half of the county councils also invite women 40-49 and 70-74 years. To be able to evaluate whether the nationwide service-screening programme is as effective as indicated by the RCTs new approaches have been applied.

In collaboration with the Oncologic Centres in Umeå and Stockholm, the effectiveness of the service-screening programme in the age groups 40-49, 50-69 and 70-74 years has been evaluated. Different approaches had to be applied to the three age groups to be able to identify proper comparison groups. With a mean screening interval of 20 months and a mean follow-up of 7 years, the reduction in the refined breast cancer mortality in counties inviting women 40-49 years as compared with counties not inviting women 40-49 years was estimated at 9%. As all counties in Sweden invite women 50-69 years the evaluation of the efficacy in that age group had to be made between counties that started service-screening early (1986-87) and counties starting late (1993-). With a mean individual follow-up time of 8.4 years the non-significant reduction in breast cancer mortality was estimated at 16%. The efficacy of also inviting women 70-74 years to screening was evaluated using the same design as for the age group 40-49. With a mean follow-up of 10 years the reduction in the excess mortality due to breast cancer was estimated at 24%.

With support from the American Cancer Society we applied new analytic methods for the evaluation of incidence-based breast cancer mortality, and estimate the number needed to screen to save one life in nine counties in Sweden using individual screening history data representing approximately 45% of Swedish women (screening history for 542,187 women in the pre-screening and 566,423 women in the screening epochs). Regardless of year of diagnosis, there were a total of 6231 deaths due to breast cancer in the period of study as a whole. Of these, 4778 were inci-

dence-based deaths in the two epochs, i.e. death among cases diagnosed within either the pre-screening or screening period. Data were analysed using Poisson regression and adjusted, when necessary, for self-selection bias, contemporaneous changes in incidence, and changes in mortality independent of screening. There was a significant 45% reduction in incidence-based breast cancer mortality in the pre-screening epoch (relative risk, 0.55; 95% CI: 0.51-0.59). After adjusting for self-selection bias, there still was a significant 43% reduction in incidence-based breast cancer mortality associated with screening (relative risk, 0.57; 95% CI: 0.53-0.62).

Client-held health records

Patient-held records have a tradition since at least the 1940s. Such records could focus either on disease and cure, like the traditional medical record, or health and prevention, like the antenatal record. Patient-held health records have been used worldwide in antenatal and child care. The aims for such records have been manifold, but most interesting is perhaps *patient empowerment*. Controlled studies in antenatal care have shown positive results regarding empowerment variables. There are few studies examining such records used by adolescents, or non-pregnant adults.

In the county of Dalarna, Sweden, a client-held health record, "My Book about Health", has been developed, targeted toward the adult population. Effects on behavioural change have been reported from distribution at primary health centres. The cost-effectiveness and feasibility of distribution in health care, at work-sites, and by mail have been compared.

A Swedish version of the record can be found at http://www.ltdalarna.se/folkhalsa. A health record for adolescents, 12 to 16 years of age, has also been developed. It consists of a file with seven different booklets, named "VIP – Very Important Person". A controlled study started during 2003, and 1-year results of the intervention are being analysed.

Health promotion in the modern society

Development in Swedish society combined with the restructuring of health care has created many new problems. In collaboration with The County Council in Västerbotten and The National Institute of Public Health, a research group has been established for research within the Public Health arena. Using the current situation within the health care system in Västerbotten as a point of departure, four different fields of Public Health emerged.

The first places its emphasis on the health care system and its potential to improve public health from a health economic perspective. The second sphere focuses on preventive methods and strategies within primary health care. A third area of importance is the development and evaluation of public health collaborations on a local, regional and national level. The last field to be covered is the health promotion role of health care. After identifying those research areas four projects have emerged.

All over the world the number of e elderly people is increasing. The fact that this development is world wide makes it even more important to reduce illness among the elderly. "Shall we treat illness when it occurs or try to prevent illness from occurring" is a well-known rhetoric question. When the population is ageing, the issue of preventive actions becomes even more important. Different efforts have been made to evaluate preventive actions using different health economic methods but it is rare to focus on the elderly population. Preventive home visits for the elderly are now being evaluated with different health economic methods. The on-going evaluation indicates that the visits have had positive effects on health and might even reduce mortality. A comprehensive economic analysis also found that the costs for the visits were equal to the decreased need for health care and home help.

A more health promoting health service from the perspectives of health professionals is the second project. One of the eleven targets in the national public health policy is "A health and medical service that more actively promotes good health". Improved population health must be an explicit goal for the health services. The basic idea is that health care will be permeated with a health promoting and preventative perspective, and this way of thinking will become a natural part of all care and treatment. The orientation towards health poses a challenge to the health care service to form strategies that develop the health promoting role. The aim of the research project is to study the opinions of health care professionals, in order to get their views on conception of health and health promoting, and to develop greater understanding about the obstacles and opportunities for the health promoting way of work. The methodology is both quantitative and qualitative. In 2005 a survey protocol was developed based on informa-

tion (on aspects on health promotion in health service) provided by health professionals in focus group discussions. The questionnaire will be sent out to about 2 500 health professionals employed by the Västerbotten County Council spring 2006.

Self-reported *stress-related and psychosomatic* problems among young people, especially teenage girls, are increasing in Sweden. Based on this the third project was born. Biological, psychological and socio-cultural, including gender-related, mechanisms on the individual, group and societal level can be involved – but there is a lack of research in this area. There are also few studies on health promotion and preventive models for use in schools, School Health and Youth Health Centres for teenage girls. Due to this the project has an interdisciplinary, qualitative/quantitative, theoretical and pragmatic explorative approach. The aims of the study is to increase knowledge about teenage girls' positive and negative body-experiences (including stress-related and psychosomatic problems and coping strategies) and develop models for health promotion and prevention within School Health and the Youth Health Centre in Umeå.

During the last decade, "social capital" has become an attractive concept within public health research. The concept calls attention to the importance of strengthening the social environment for health promotion, instead of only focusing on individual risk factors.

Within the social capital research field and health it is possible to identify two main areas. The first and most dominant area focuses on the concept as a key to explain social inequalities in health. Several studies have pointed to a connection between social capital at the state or community level and health at the individual level, showing that individuals have better health in communities with a big stock of social capital. In these kinds of studies quantitative data from already existing registers are often used to compare indicators of social capital and health outcomes between different communities or states.

In our research we want to focus on the second and less explored area of social capital, by investigating how social capital can be used as a resource for community based health interventions. If there is a strong link between social capital and health, a key goal of health promotion would be to mobilize social capital in local communities as a way of enabling healthy behaviours. However, there is still a lack of knowledge about how social capital can be mobilized at the community level. This kind of study demands an explorative design and the use of qualitative methods to gain knowledge about the context bound social capital and the mechanisms that generate it. In our continuing research within this area we will also highlight power and gender aspects of social capital.

Health, stress and professional preferences among health care employees – a gender perspective

This research project focuses on working conditions in health care organisations. The aim is to study work satisfaction, job expectations and career preferences among recently graduated health professionals. In total 1,400 nurses, physicians, occupational therapists and physiotherapists were selected in a national survey that was performed in collaboration with Statistics Sweden. Questions about working conditions, work management and work related stress was covered, including the Job Strain questionnaire (DCS) and the Effort-Reward-Imbalance (ERI) questionnaire. Gender was the main analytical category. When analysing work related stress it is essential to also include unpaid, household work as part of the overall work that a person performs every day. Therefore, paid as well as unpaid work were included in the analyses of working conditions. Analyses revealed major dissatisfaction with work organisation and health care management, especially among those working in the public sector in all professional groups. A majority of the women experienced work stress and reported having a heavy workload at home, which may have a spill over effect on career opportunities. Very few men (< 5%) reported having main responsibility for household work and children. Swedish health care is facing an increased scarcity of employees and therefore the dissatisfaction described should be seen as a warning sign. Efforts must be made to make health care an attractive arena for future jobs. In addition, the results imply that the division of labour in unpaid work is far from gender equal, not even among those young professionals who are the focus in this study.

Social insurance research

Within the field of social insurance research a study is being performed regarding the high incapacity rate in Västerbotten, mainly the number of days with sickness allowance and disability pension. The project is being conducted together with the Social Insurance Office in

Västerbotten. The aim of the study is to find ways to reduce the high incapacity rate. The study describes and analyses the situation for persons on sick leave, the various actors' perception of their roles for those on long-term sick leave, and the different parties' perceptions of the other actors and of co-operation. Interviews with insurance office employees, doctors, employers and persons on long-term sick leave were supplemented by questionnaires to persons on long term sick leave, to the board of social insurance and persons reporting on cases concerning early retirement. The results of the interviews with persons on sick leave showed that they had difficulties in asking for help and support. They felt such loyalty to their employers that they did not ask for adjustments of working places when needed. The results of the questionnaire given to persons on long-term sick leave showed that women took a greater responsibility for their own rehabilitation, while the employers showed an earlier interest in sick male employees than in sick female employees. The employers were also keener to adjust working places for men than for women.

The interviews with the employers showed great differences in attitudes and ways of treating employees, which also led to different models for dealing with work environment, sickness absence and rehabilitation. Lack of collaboration between the actors and need for support in the rehabilitation process among the sick-listed were some of the major findings. More aggressive action from social insurance officials is also needed. Among medical doctors there was a lack of knowledge of the social insurance legislation as well as the requirements in the labour market. As a whole the members of the board of social insurance seemed to be skilled in their knowledge of how to use the social insurance legislation.

A study in which the four northern counties in Sweden, Norrbotten, Västerbotten, Jämtland and Västernorrland, are being compared with a county in the south of Sweden, Kronoberg, is ongoing. The study is focusing on social insurance, how it is used by persons living in these areas and how the doctors, social insurance officials and the board of social insurance are dealing with these matters. The studies show that the difference within each county is greater than between the counties in northern Sweden and Kronoberg. The total amount of money used for social assistance differed a lot between the communes but was generally higher in the north than in Kronoberg. Further research in that field is now underway. Generally there where no systematic differences between the different counties in using welfare benefits and in the judgements of officials on the right to obtain social benefits.

A study abut the Swedish welfare system has started. The study covers three subsystems: social insurance, labour-market programmes and benefits, and social assistance. The purpose was to explore regional differences and find out whether a high cost in one subsystem is explained by a lower cost in another. The method used was to compare cost per capita (population aged 16•64). Five counties were selected for study. The study was based on data on seven different outcomes in 2003, collected in 52 municipalities for men and women separately. Costs of social insurance were higher for women than for men, while the opposite was true of labour-market costs. Social assistance costed more for men than for women. In several municipalities, relatively high social-insurance costs were accompanied by low costs of labour-market programmes. Thus, welfare programmes seem to work as 'communicating vessels'. High costs in social insurance seem to be related to slack labour markets.

A study about the attitudes to the social insurance was initiated during 2004 and is still ongoing. Around 20 different researchers in many disciplines are engaged in this study. The material consists of four questionnaires, 50 000 individuals all around Sweden has got a questionnaire together with 4 000 doctors, 8 000 employers and 5 000 social insurance officials. A first anthology with results will be presented in the fall of 2006.

Health economic evaluation research

Health economic research in the unit follows two main lines; the normative base for economic evaluation and the integration of epidemiological and economic data as a basis for decision-making.

During 2001, a PhD project along the first line was launched aiming to combine economic and gender theory. The point of departure for one sub-study is the well-known observation that women live longer but seem to suffer more illness than men. The policy conclusions suggested as a response to this observation are apparently very different, and the reason is the normative component applied in the decision-making process. The purpose of this study is to comparatively apply different theories such as welfarism, extra-welfarism, egalitarianism and normative gender theory

in the situation mentioned above, and to show the policy implications following from each of these. In a second study the relationship between gender and health was investigated. The population consisted of all Swedish couples who had their first child together in 1978. Equality pointers used were income, education, parental leave and temporary child care. Health measures used were mortality and sickness leave during the time period 1978 to 2003. It was indicated that equal women and men in the domestic sphere run lower risks of mortality and morbidity. While in the public sphere, equal women have increased risks and equal men decreased risks.

In collaboration with the Centre of Epidemiology at the National Board of Health and Welfare, a model has been developed for the purpose of allocating resources to prevention and treatment of cardiovascular diseases. The model basically combines epidemiological data for a certain geographical area with estimates of cost-effectiveness for a series of possible interventions. Assuming that the goal for policy is health maximisation, a unique set of interventions best satisfying that goal can be identified. However, the normative assumption of health maximisation has been questioned, and thus, we plan to base the model on alternative normative assumptions, for instance rank interventions according to disease severity and according to common medical practice. These comparisons will reveal the relationship between different normative assumptions.

A further area of research is the economics of physical activity. So far a model has been developed with the purpose of analysing cost-effectiveness and equity in attempts to increase the population's physical activity. The model was used as a basis for a literature review about physical activity as a treatment strategy in health care.

In 1999 the Swedish Government invited local authorities to apply for financial support to develop models for preventive home visits. 21 projects all over Sweden received grants and Nordmaling community was one of the selected areas. Nordmaling is a small community with less than 8,000 citizens in the north of Sweden. An important condition for getting grants was that the local authority responsible for elderly care and the county council responsible for the primary health care, should be jointly responsible for the preventive home visits project.

The preventive home visits were performed during 2000 and 2001. The aim of the project in Nordmaling was to investigate whether preventive home visits, targeting healthy pensioners 75+ years, could reduce mortality and increase quality of life.

So far, the costs of the intervention as well as consequences on mortality and quality of life have been reported.

During the last few years, we have also been involved in health economic studies in low-income countries in Asia and Africa.

In Bangladesh some 45% of new-borns have a low birth weight (LBW) (<2500g), the highest prevalence reported globally. Most of the LBW's in Bangladesh are considered to be a consequence of foetal growth retardation. Bangladeshi mothers are in most cases malnourished and it is assumed that both the mother and the child will benefit from dietary supplementation. However, there is limited knowledge on the efficacy of such interventions in improving birth weight and maternal weight, as well as on the effectiveness of such programmes in full-scale implementation. There are ongoing national programmes of food and micronutrient supplementation in Bangladesh, but the cost is probably high and nothing is known about the cost-effectiveness. Thus, the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B) in Dhaka has started a large trial with the purpose of studying efficacy and effectiveness in food supplementation, and 3000 women will be invited to the study. We will investigate the cost-effectiveness and equity in the trial. In particular, the incremental cost-effectiveness in a sequence of different interventions will be studied. In 2002 a study aimed at measuring Quality Adjusted Life Years was started and the fieldwork was completed. The study will elicit pregnant women's perceived severity weights (scores) for chronic energy deficiency (CED), anaemia during pregnancy, respiratory tract infection, urinary infection and postpartum infection with an aim to capture the changes in QALYs gained by the intervention of food and iron-folate/multiple micronutrient supplementation. This will be done by using the EuroQol 5-D questionnaire and Visual Analogue Scale in combination with focus groups and interviews.

The need for assessing the health care system in Vietnam is essential. The main idea is to develop a general multi-criteria approach, for instance, that people should pay taxes or insurance fees according to ability, that access to health care should solely be based on need, and that resources

should be used effectively. The factual situation can in the next step be compared with these criteria, giving the possibility to assess and evaluate the different components of the health care system as well as the whole system. Most of the fieldwork in this research can be done in Bavi using information collected in the field laboratory. The research programme also aims at co-ordinating master and doctoral studies, hopefully increasing the usefulness of the research results as a base for planning and decision-making in Vietnam.

A PhD-project within this research programme focuses on the vicious circle of poverty and ill health. The topic is injuries and their causes and consequences but it could have been any lasting and severe disease. Poverty and health have very close links to economic development and to how health care is financed. Out-of-pocket payment seems to increase the risk of poverty while prepaid health care reduces it. It has been shown that poverty is a risk factor for injuries and that injuries cause a considerable loss of income in affected families.

Smoking prevention - from international to regional research and action

Each year tobacco products kill close to 5 million people around the world, and WHO estimates the numbers of tobacco related deaths to rise to almost 10 million in twenty years time. The global trend is that smoking is increasing with a transition from north to south. About 50 % of the men and more than 10 % of the women in the world smoke. In 2003, WHO adopted the Framework Convention on Tobacco Control to promote global action against tobacco, the first framework convention in the field of public health. The convention was ratified by 40 countries at the end of 2004 and in effect 90 days thereafter. Sweden signed the convention in June 2005, after adaptions of the Swedish tobacco law. Though there are still some points ahead of us that has to be solved in a Swedish perspective to be able to live up to the convention. The main strategies in Sweden to reduce smoking on a societal level during the last decades have been through information, taxation and legislation. At the group and individual level the most important strategies have been smoking cessation targeting adults and supporting young people in saying no to tobacco. International studies have shown that it is possible to prevent or postpone the onset of tobacco use. From a Swedish perspective, tobacco prevention in young people is an under researched field. A research project at the department is addressing the issue. Below there are different examples of our work in the field of tobacco prevention.

In order to prevent adolescent use of tobacco in the county of Västerbotten, the planning and development of a long-term program started in 1993 by the County Council. The developed program targeting young people, called *Tobacco free duo*, was a multifaceted programme mainly focusing on building policies, increasing knowledge on tobacco related issues and using adult support and methods of social influence. We evaluate the program using data collected in Västerbotten County on adolescents' use of tobacco. The focus of the research is to evaluate the programme's effect on young people's use of tobacco and to get better knowledge on important preventive factors.

National studies on young people's use of tobacco in Sweden were carried out by National Board of Health and Welfare and the National Public Health Institute in 1987 and 1994. In addition to studying the tobacco prevalence, the second study also covered young people's attitudes to tobacco and factors influencing their use of it. In 2003 we were commissioned by the National Public Health Institute to repeat the study. The study was performed in 2004 and a report was presented. The study shed light on changes over time in tobacco prevalence, knowledge and attitudes but also age and gender differences. A popular science report was written and presented in 2005.

In recent decades increasing urbanisation has been seen in *South Africa*, particularly in the black African population. In 1991 48% of the population lived in urban areas, increasing to 54% in 1996 and it is projected to rise further. The South African population is also highly mobile and migrates constantly between rural and urban areas, resulting in a quick transfer of urban influences to rural areas. A dual burden of disease occurs. The challenge for health is to complete the unfinished task of managing the diseases of poverty while simultaneously initiating prevention and cost-effective care of patients with non-communicable diseases. One priority is *tobacco prevention in coloured pregnant women*. It has been shown that the coloured women of South Africa have high smoking rates during pregnancy. Consequently, they have high rates of pregnancy complications affecting themselves and their unborn babies. There is a long-term collaboration between us and

the Medical Research Council in Cape Town on a project on smoking cessation during pregnancy. Studies were carried out in Western Cape during 2001-2003 to describe and understand the high smoking rates among coloured pregnant women. A cross-sectional survey as well as interviews with key informants, doctors and midwifes who provide care during pregnancy and pregnant mothers were performed. Together with experiences from models of intervention, such as the ones used in Sweden, the results from these studies formed a base for planning an intervention. Through a series of exchange visits and joint workshops an intervention study was designed together with a plan for a scientific evaluation. The study is performed in close collaboration with people involved in training midwives and those planning and developing antenatal services nationally in South Africa and in the province of Western Cape. During 2004 a South African Master student used this framework in her thesis on smoking during pregnancy. In 2005 the plan was developed further into a plan for a PhD at our department but with supervision also from MRC. The thesis will be one of two theses performed and funded through the MRC focusing on evaluating a large smoking cessation intervention using both qualitative and quantitative methodologies,

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with people involved in training midwives and those planning and developing antenatal services nationally in South Africa and in the province of Western Cape.

Indonesia is the fourth largest tobacco market in the world. The high tobacco consumption is an effect of a weak tobacco control policy. The main reasons are due to its contribution to the government revenue and job opportunities. The government is dependent on the tobacco industry, as a means for sustaining employment levels, and for taxation revenue. Program and policies to reduce the exposure to environmental tobacco smoking (ETS) in public places and workplaces are regulated, even though in fact it is not well implemented. Today almost all studies on ETS are performed in developed countries with a prevalence of smoking lower than in most countries in Asia, and in particular in Indonesia with a totally different smoking culture including higher tolerance of smoking in public places and at home. Therefore a study has been initiated with the overall objective to study the effects of ETS exposure on the respiratory status of adolescents and to understand social norms and beliefs for implementing a feasible strategy to reduce domestic ETS exposure in Jogjakarta, Indonesia. A survey of 2296 households showed that 47% of men and 59% of women 15-75 years were exposed to ETS.

The Community Health and Nutritional Research Laboratory (CHNRL) in *Indonesia* has collected wealthy data on demographic indicators in Purworejo Demographic Surveillance Site (DSS) since 1994. Research in Purworejo has focused on maternal and child health issues. In general, the DSS aims to increase community health and nutrition status at the district level, particularly among children and women in terms of child survival and safe motherhood. Data gained from this longitudinal surveillance provide information on the baseline and the changes of the demographic, morbidity, nutrition, and health services in the area. It will serve as a basis for health policymakers in the region.

With the ongoing epidemiological transition in most developing countries, the need of monitoring non-communicable disease risk factor in the population was responded by conducting the risk factor surveillance, starting from 2001 in collaboration with Epidemiology and Public Health Sciences, Umeå University and the World Health Organization. The results showed that the non-communicable diseases and their risk factors do no longer belong to the well-off people exclusively, but contribute also to the burden of disease among the poor in our setting.

4. Training at Umeå International School of Public Health

An integral component of the development of the international collaborations has been the International Public Health training, starting from ad hoc training courses and workshops that made a springboard for the research. What started as short courses in epidemiological methods has grown into a full MPH programme taught in English and with major recruitment from abroad, mainly from developing countries. Since 2001, this Public Health programme has had the status of an International School within the university. With its strong research orientation, the programme has retained its role as a channel into research training.

Magister of Public Health Programme

We have offered an international Master of Public Health programme since 1991. The MPH courses provide the scientific basis for professional work in the field of Public Health and also serve as a channel into and an introduction to research in Public Health. All teaching is grounded in research performed within the department and is method oriented. In group or PC-lab work, adapted datasets from actual research – cleaned of all identification – are routinely used.

In 1994, when the degree system in Swedish higher education was restructured, a master's level degree called *Magister* was reintroduced after thirty years of absence. This *Magister* of Public Health Degree corresponds to the internationally recognised MPH degree, which is also the English translation of it.

From the beginning, all our courses have had internationally focused content, contrasting aspects of Public Health in the countries of Western Europe and North America with those of Africa, Asia, and Latin America. Since 1995, all teaching is in English, following an increasingly international recruitment of students. The Swedish educational system, which does not charge tuition fees, attracts foreign students who in turn contribute from their experience to the international perspective on Public Health during the training.

In the last few years, the spread of Internet access has become increasingly obvious in the recruitment, or rather self-recruitment, of international students. Suddenly, whole batches of programme applications turn up from "new" countries, from which we previously received few or no applications. It would be interesting to know if this reflects the rate of introduction of Internet Cafés in places such as Yaounde (Cameroon). In more quantifiable terms, the number of applicants with no previous connection to our department, or to those we collaborate with internationally, has steadily increased in a way that cannot be a reflection of increased activities by Swedish embassies abroad (Figure 10). In practical terms, this also demonstrates an increasing demand on our efforts to improve our web-based information.

UMEÅ INTERNATIONAL SCHOOL OF PUBLIC HEALTH-
Sources of Master of Public Health students 1991-2005

Besides the need for up-to-date information on our home page, the increasing interest also heightens the pressure on our administrators to cope with the growing flow of applications and demands for information, as well as to offer assistance to students, once they are accepted and in place in the harsh North. Our administrators play an extremely important role in the development of the Umeå International School of Public Health. The importance of developing administrative and social skills is hugely under-rated in comparison to the stress laid on research qualifications and experience of teachers.

To date, 302 students from 52 countries, including Sweden, have joined the programme (see map above). In the autumn of 2005, 30 new students joined the programme.

While many of the international students have been recruited through research connections, a growing number are "free movers", i.e. students moving independently on an international training market. During the period 1996-2004 we received financial support from the Swedish STINT foundation to offer scholarships to students from certain developing countries. As of 2001 the East European Committee is also sponsoring two MPH students annually from the Northern State Medical University in Arkhangelsk, situated in the Barents region of Russia.

Swedish recruitment has a Northern bias, but students from all over the country who have an interest in international Public Health come to Umeå for their MPH studies. While most of the non-Swedish students come to Umeå to study full time for the MPH degree, the majority of the Swedes do their studies while working part time.

In 2005, 37 students completed the Master degree, 6 Swedes and 31 non-Swedes, with a number of stragglers completing their theses at home before they can apply for the degree. Over the years there has been a fairly consistent sex ratio pattern, with a predominance of women students among the Swedes and mainly men among the non-Swedes, but in the last few years the proportion of female students from developing countries has been increasing. Among the 2005/06 MPH group of students, 43% are females.

Teaching is concentrated to full time weeks of lectures, seminars and group or PC-lab work. Between course weeks, which average at two weeks per month, students study on their own, but with access to faculty, in person or by telephone or e-mail. This arrangement was developed because of Umeå's position in the sparsely populated North in order to allow nation-wide recruitment of students, many of whom would combine their studies with working at least part time.

The requirement for the Master of Public Health degree is 80 academic study points of optional minor subjects and 80 points from the major subject, Public Health (80 study-points corresponds to two full time years of study, 120 ECTS). Previous studies can be counted towards the requirements for the degree. Courses from universities outside Sweden can be considered equivalent to Swedish major or minor subject courses, but this is conditional on approval by national Swedish academic authorities. Normally, previous training considered as academic level training by Swedish standards will be included as minor subject courses. For students trained in health professions or in other areas with obvious Public Health content, relevant courses from previous studies can be included as major subject courses for the degree, which can make it possible to complete the MPH part of the programme in less than two years.

The Public Health Major programme consists of course modules that can be taken either full time or part time. The programme includes two compulsory courses, *Public Health* and *Epidemiology*, each worth 10 points, *MPH thesis* worth 20 points and *elective courses* (see below) to make up the required 80 points.

Elective courses 2005/06	
Qualitative methods	10 p
Biostatistics	10 p
Medical sociology for public health	5 p
Medical sociology: inequity in health	5 p
Public Health Informatics	10 p
Evaluation in Public health	10 p
Environmental medicine	10 p

A variety of courses offered by other departments can also be included. There is a mutual agreement between the university departments in Public Health within Sweden to accept each other's courses for the MPH degree. This makes it possible for students to select from a wider range of specialised courses and offers greater mobility.

Topics of completed MPH theses are shown in the publication list provided on page 69.

Summer course: Epidemiology and Field Research Methods

The summer course 2005

Since 1988 our department has offered a research methodology course in Epidemiology and Field Research Methods. Financial support from Sida/SAREC has made it possible for 12 research students/researchers within different bilateral research collaborations to participate in the course, held in June every year.

The course has become an important research training base for health researchers, health planners and practitioners from the global network that Sweden is part of. In 2005 we received more than 90 applications for the 25 available course places. We strive for an international and multidisciplinary attendance where the participants' own experiences are part of the curriculum. Quantitative and qualitative methodologies are practically applied to analyse authentic data from our research collaborations. The course is given high priority and the team of teachers/facilitators always includes colleagues from the bilateral collaboration out of which the data material emanates.

Due to the large number of applicants we decided to admit 31 participants for the summer course in 2005. Eight of the participants came from Sweden. Other countries represented were, Ethiopia, Kenya, Uganda, Vietnam, Bangladesh, Guinea Bissau, Palestine, Russia, South Africa, and USA.

Research training

We offer degrees in three PhD subjects *Epidemiology*, *Public Health* and *Family Medicine and Epidemiology*.

Presently (2005) 35 research students are registered at the department, 18 men and 17 women (Table 5). Thirteen PhD students have been recruited within international research collaborations, while 22 are Swedish research students. During 1987-

2005 39 PhD theses (18 by women) and 7 licentiate theses (6 by women) were defended at the department. Seventeen of the PhD theses and 5 licentiate theses were defended by international research students.

Our unit is responsible for a major part of the basic research training course of the Medical Faculty, and from 1997 we have also offered an advanced course in applied biostatistics with computer applications. The yearly summer course and the courses included in the Masters' programme in public health are also used by several research students as part of their research training programme.

Several of the research students of the department are affiliated with another department also, e.g. a clinical department, or to a university in another country. Corresponding representation of two or more departments is often found among the advisors to the research students.

Some of our PhD students studying in Umeå during 2005

The department is involved in research and research training in collaboration with a number of universities, departments or NGOs in the United States, Latin America, Africa and Asia. We also have close links with several departments in Umeå. We thus share tutorial responsibilities and collaborate with relevant nearby clinics as well as social science departments and other national institutions. In addition to research training courses and individual tutorials, the seminars of the department constitute an important part of the programme (Table 4).

Single courses

All courses from within the MPH programme can also be taken as separate courses by students not wishing to take the MPH degree. Priority is given to those studying for the degree, but a number of non-programme students are always accepted as well. Especially with the research method oriented courses, such as *Qualitative Methodology, Epidemiology* and *Biostatistics* we see it as essential that they are accessible to research students in adjoining disciplines.

Biomedical programme

During the first semester of the Biomedical programme our unit is responsible for a 5 points course *Epidemiology and biostatistics*. In the autumn 2005 course, 51 students participated.

Increasing UISPH involvement in teaching outside Sweden

Besides the regular courses offered in Umeå, such as our summer course and the MPH programme, we have intermittently been involved in teaching outside our own university. Some of these activities are organised within teacher exchange programmes while others are ad hoc courses, organised within research collaborations.

A Master program in Epidemiology was started in 2003 León in co-operation with Umeå University with a developed core curriculum to which new modules can be attached to form Master programs in mental health and reproductive health. It is a two years training program of 80 points. The program consists of series of courses which combine theories and field practices to obtain a Master degree. It combines broad training in public health with specific training in the principles and methods of epidemiology, integrating knowledge to research and management of the health services. The programme comprises four compulsory courses: Epidemiology, Biostatistics, Public Health and Field Epidemiology, and at least two of the following elective courses: Tropical Medicine, Qualitative Methodology and Evaluation in Public Health. A thesis, preferable connected to the DHSS system must be concluded at the end of the training period. The second group of students is to finalise their studies in 2006. This is also a significant step forward towards the Nicaraguan sandwich model adopted for the PhD training

Table 4. Seminars at the department 2005.

February	**Faustine K Nkulu Kalengayi.** Experiences of HIV/TB care and prevention among African immigrants in Sweden
	Margareta Norberg. Emotionellt stöd, arbetsstress och risk för diabetes. Varför ser det olika ut för män och kvinnor?
March	**Joakim Isaksson.** Schools support for children with special educational needs - A local study of individual educational plans in Umeå municipality
	Lara Payne. Retrospective mortality survey among Internally Displaced People, Sudan
	Miguel San Sebastian. International trade agreements: what's health got to do with them?
April	**Gunnar Lundqvist.** Rökvanor bland medelålders västerbottningar
	Endy Paryanto Prawirohartono. Growth and health of children under two years of age in Purworejo district, Central Java, Indonesia
	Ekawaty Lutfia Haksari. Small for gestational age infants in Indonesia
	Peter Byass. Non-communicable diseases among the world's poorest billion
	Nawi Ng (Midterm seminar). Understanding the Non Communicable Disease Risk Factors Transition in Developing Countries – The Case of Indonesia
May	**Margareta Norberg (**Midterm seminar) Tidiga markörer för Typ 2 diabetes
	Urban Janlert. Status syndrome -- the explanation of social inequalities
	Gunnar Kullgren. Mental ill-health among women in Butajira, Ethiopia
	Sven Hassler (Dissertation). The health condition in the Sami population of Sweden
	Sophie Graner. Indications of successful maternal outcomes in a low-income setting - quantitative and qualitative studies assessing maternal health care and obstetric care in a rural district in Vietnam.
	Eliette Valladares (Pre-dissertation). Domestic violence during pregnancy in Nicaragua
June	**Hoang Van Minh (**Midterm seminar). Cardiovascular diseases in Bavi district, Vietnam: A journey from the past to the future
	Rodolfo Peña. Base line results from DHSS - León
	Nemam Ghafouri. What to do after a cross-sectional study? CVD risk factor development in transitional Kurdistan.
	Emil Löfroth (Midterm seminar). Vem ska få behandling?
	Maj-Lis Voss. Assessing well being in middle childhood.
August	**Steve Tollman and Kathy Kahn**. Umeå to Agincourt: our world from different angles
September	**John Porter**. Social and Structural Interventions for HIV/AIDS: update from the IMAGE study
	Miguel San Sebastian. Millennium Development Goals or Mediocre and Disappointment Generalities ?
	Eliette Valladares (Dissertation). Domestic violence during pregnancy in Nicaragua
	Ingrid Mogren (Associate professor lecture). Graviditeten – riskfaktor eller friskfaktor? Graviditetens effekt på hälsan hos kvinnan och barnet.
	Kjerstin Dahlblom (Midterm seminar). Home alone" - children taking care of sibling in Leon, Nicaragua. A public health approach
	Arturo Quizhpe. The People's Health Movement: The voices of the Earth are calling
	Mesganaw Fantahun Afework (Midterm seminar).Mortality Patterns by different Patterns by different age and sex in rural Ethiopia
	Nguyen Xuan Thanh (Pre-dissertation). The injury poverty trap - causes, consequences and possible solutions
October	**Nguyen Thi Bich Thuan** (PhD proposal). The burden of household health care expenditure in Vietnam
	Ann Öhman (Associate professor lecture). Gender perspective in health
	Alexander Kudryavtsev (PhD proposal). Risk factors and motivation for narcotic drug use in students: a comparison of Northern European Russia and Northern Sweden
	Kathy Kahn (PhD proposal). Public Health Education and training in diverse settings: Common challenges
	Elli Nur Hayati (PhD proposal). Domestic violence in urban and rural Indonesia: Women's experience and men's role for prevention
	Kathy Kahn (Midterm seminar). Dying to make a fresh start. Mortality and health transition in the new South Africa
November	**Zaino Petersen** (PhD proposal). A patient-centred smoking cessation intervention – Barriers and promoting factors to smoking cessation as perceived by pregnant women.
	Rose Laisser (PhD proposal). Health workers' and community groups' perceptions about intimate partner violence and their roles in care and prevention in Tanzania.
	Felix Kisanga (PhD proposal). The socio-cultural context of child sexual abuse (CSA) in Tanzania: possibilities and barriers for community prevention.
	Isabel Goicolea. Adolescents´ pregnancies in the rainforest of Ecuador
December	**Nguyen Xuan Thanh** (Dissertation). The injury poverty trap – causes, consequences and possible solutions

Table 5. Doctoral students registered at the division 2005.

Name	Professional background	Thesis subject
Monika Appel	Sociologist	Creative competition or hampering hierarchy-a study concerning the academic working environment focusing on the doctoral student
Kjerstin Dahlblom	BA	Children caring for siblings. Children's perspectives of caretaking in León, Nicaragua – a qualitative and quantitative approach
Kerstin Edin	Midwife	Våld i samband med graviditet och barnafödande – kvinnan, barnet och mannen
Berit Edvardssson	Family physician	Varför kan en del människor med sjukahussymptom arbeta och andra inte
Anders Emmelin	BSc, health inspector	Air pollution epidemiology
Malin Eriksson	Social worker	Socialt kapital som verksam resurs i befolkningsinriktade folkhälsointerventioner – förutsättningar, hinder och möjligheter.
Mesganaw Fantahun Afework	MD, Community Health	Mortality patterns by age and gender in rural Ethiopia
Edward F Fottrell	BSc, MPH	Vital event surveillance in demographic surveillance sites
Mats Granvik	Health planner	Befolkningen och hälso- och sjukvården – om psykosociala problem, prevention, somatisering och medikalisering
Lars Hagberg	Health economist	Hälsoekonomisk utvärdering av samhällets insatser för att främja fysisk aktivitet i befolkningen
Sven Hassler	BA, political sciences (Diss. 050524)	The health condition in the sami population in Sweden, 1961-2002. Causes of death and incidences of cancer and cardiovascular diseases.
Dao Lan Huong	MD	Mortality in transitional Vietnam
Kerstin Hultén	Nutritionist	Breast cancer and dietary habits – an epidemiologic study of protective factors
Shabbir Ismail Abbas	MD, Community Health	Epidemiology of HIV/AIDS and high risk sexual behaviours among populations of Central Ethiopia
Lars Jerdén	MD, general practitioner	Empowerment och prevention – utvärdering av nya verktyg
Helen Johansson	Physiotherapist	Professionernas syn på hinder och möjligheter för en mer hälsofrämjande hälso- och sjukvård
Gunnar Lundqvist	MD	Tobaksvanor hos medelålders västerbottningar. Risk faktormönster, rökstoppsattityder och erfarenheter av att sluta röka.
Emil Löfroth	Economist	Vem ska få behandling? Ekonomiska, etiska och epidemiologiska aspekter på fördelningen av resurser för att förebygga hjärkärl-sjukdom.
Anna Månsdotter	Economist	Hälsoekonomisk utvärdering i ett genusperspektiv
Anne Nafziger	Cardiologist	Obesity in predominantly rural areas: comparisons of northern Sweden and upstate New York, USA
Nawi Ng	MD	Non-communicable disease risk factors and cause specific mortality in Purworejo district, Indonesia
Maria Nilsson	Social worker	Hälsofrämjande arbete bland ungdomar – att förebygga tobaksbruk
Margareta Norberg	MD, general practitioner	Tidiga riskmarkörer för utveckling av typ 2 diabetes TRIM-studien
Per Nordin	Statistician	Kontaktgrad och vårdkonsumtion, en alternativ ansats för att belysa behov av sjukvård.
Leonie Dapi Nzefa	Nutritionist	Food habits of school children in relation to socioeconomic and cultural factors in Cameroon
Nils Oscarsson	OD, dentist	Health economic evaluation methods for decision-making in preventive dentistry
Firdy Permana	MD	Environmental tobacco smoke exposure (ETS): children's respiratory effects and the strategy to reduce domestic exposure
Klas-Göran Sahlén	Nurse	Missgynnas äldre i hälsoekonomisk utvärdering? – illustration från två lokalsamhällen.
Rubina Shaheen	MD	Combined interventions against maternal depletion and low birth weight in Bangladesh: Issues of cost effectiveness, compliance and equity
Fikru Tesfaye	MD, Community health	Surveillance of risk factors for non-communicable diseases in Butajira district, Ehtiopia
Nguyen Xuan Than	MD (Diss. 051209)	The "injury poverty trap" – causes, consequences and possible solutions
Susanne Waldau	Journalist	An organisational strategy for priority setting in health care
Maria Wiklund	Physiotherapist	"Kroppsjag, empowerment och välbefinnande" - Prevention och hälsofrämjande för tonårsflickor med stressrelaterad & psykosomatisk ohälsa
Eliette Valladares Cordoza	MD, gynaecologist (Diss. 050914)	Physical abuse, psychosocial factors and pregnancy outcomes in Nicaragua
Hoang Van Minh	MD	Cardiovascular diseases in Bavi district, Vietnam: A journey from the past to the future

Table 6. Visiting scientists and guest researchers at the division during 2005.

Cameroon	Leonie Prudence Dapi Nzefa	Medicine and Biomedical Sciences, University of Yaoundé
China	Zu Zhong	Fudan University, Shanghai
Denmark	Finn Kamper Jørgensen	National Public Health Institute, Copenhagen
Ecuador	Arturo Quizphe	Medical Sciences, University of Cuenca
	Isabel Goikolea	UNFPA (United Nations Population Fund), Coca
Ethiopia	Fikru Tesfaye	Community Health Department, Addis Ababa University
	Mesganaw Fantahun Afework	Community Health Department, Addis Ababa University
	Yemane Berhane	Community Health Department, Addis Ababa University
	Shabbir Ismail Abbas	Community Health Department, Addis Ababa University
Finland	Elina Hemminki	Stakes, Helsinki
Indonesia	Endy Paryanto Prawirohartono	Public Health, Gadjah Mada University, Jogjakarta
	Ekawaty Haksari	Dept of Child Health, Sardjito Hospital/School of Medicine, Gadjah Mada University
	Nawi Ng	Public Health, Gadjah Mada University, Jogjakarta
	Eli Nur Hayati	Rifka Annisa Research and Training Center, Jogjakarta
	Adi Utarini	Public Health, Gadjah Mada University, Jogjakarta
Kenya	Eliya Zulu	African Population and Health Research Center, Nairobi
	Nyovani Madise	African Population and Health Research Center, Nairobi
Laos	Bounsai Thavisout	Faculty of Medical Sciences
	Sing Menorath	Faculty of Medical Sciences
	Vanphanom Sychareun	Faculty of Medical Sciences
	Alongkone Phengsavanh	Faculty of Medical Sciences
Malawi	Fyson Kasenga	Malamulo SDA Hospital, Makwasa
Netherlands	Gerdien Dalmeijer	Division Human Nutrition, Wageningen University
Nicaragua	Elliette Valladares	CIDS, UNAN-León, León
	Rodolfo Peña	CIDS, UNAN-León, León
	Mariano Salazar	CIDS, UNAN-León, León
	Jacobo Morales	CIDS, UNAN-León, León
Norway	Grete Botten	Dept of health economic and management, Oslo
Russia	Alexander Kudryavtsev	Institute of Public Health, Health Protection and Social Work, Northern State Medical University, Arkhangelsk
South Africa	Kathy Kahn	Dept of Community Health, Wits University, Johannesburg
	Steve Tollman	Dept of Community Health, Wits University, Johannesburg
	Zaino Petersen	Chronical diseases and lifestyle, MRC, Cape Town
	Krisela Steyn	Medical Research Council, Cape Town
Sweden	Vinod Diwan	IHCAR, Karolinska Institutet
	Solvieg Freudentahl	SIDA, Stockholm
Tanzania	Rose Laisser	Midwifery School, MUCHS, Dar es Salaam
	Felix Kisanga	Epidemiology and Biostatistics, MUCHS, Dar es Salaam
	Gideon Kwesigago	Epidemiology and Biostatistics, MUCHS, Dar es Salaam
	Japhet Killewo	Epidemiology and Biostatistics, MUCHS, Dar es Salaam
	Thomas Ndaluka	Epidemiology and Biostatistics, MUCHS, Dar es Salaam
	Willy Urassa	Dept of Microbiology/Immunology, MUCHS, Dar es Salaam
	Aldin Muatembei	Dept of Kiswahili, University of Dar es Salaam, Dar es Salaam
USA	Paul Jenkins	Basset Research Institute, Cooperstown, New York
	Anne Nafziger	Basset Research Institute, Cooperstown, New York
	Thomas Pearson	Dept of Community and Preventive Medicine, University of Rochester, Rochester NY
UK	John Porter	London School of Hygiene and Tropical Medicine
	Edward Fottrell	Nottingham
Vietnam	Nguyen Xuan Than	Medical Economics, Hanoi Medical University, Hanoi
	Dao Lan Huong	Hanoi, Vietnam
	Hoang Van Minh	Public Health, Hanoi Medical University, Hanoi
	Hoang Minh Hang	Hanoi Medical University, Hanoi
	Nguyen Lan Viet	Hanoi Medical University, Hanoi
	Nguyen Thi Bich Thuan	Ministry of Health, Hanoi
	Chuc Nguyen Thi Kim	Institute of Health Strategy and Policy, Hanoi

5. ADVOCACY

Consultancy and advisory functions

We have participated in public health processes through membership of a number of local, regional, national and international bodies, and local and regional peer-review groups on research and development.

Researchers from our department are currently scientific public health advisers to national boards and institutes and referees for a number of scientific journals. We were key advisers behind the Västerbotten County Council Public Health Policy Programme. On a regular basis we train local and regional political assemblies as well as patient organisations and public associations. We participate annually in more than one hundred public health education activities, both for basic public health training and dissemination of public health research.

We are also engaged in various consultancy and advisory functions. Some of these missions during 2004 are shown in Table 7 below.

Since 1992, we have administered the Sida-allocated Minor Field Study (MFS) scholarships given to Swedish professionals/students within the health sector or health related fields. These scholarships will make it possible for them to perform a small study during a two-month period in a developing country. In 2004 four such grants were administered by our department. Reports from all the field studies are now being published in a report series (p. 73).

Scandinavian Journal of Public Health

We have entered our seventh year as Editorial Office of *Scand Journal of Public Health*. The journal is owned by the Associations of Public Health in the Nordic Countries (the Icelandic Public Health Association, the Swedish Association of Social Medicine, the Finnish Society for Social Medicine, the Danish society for Public Health and the Norwegian Society of Public Health). As of 2005 the chair of the Executive Board is Sakari Suominen from Finland.

We have earlier reported having received 131, 141 and 156 manuscripts during the first three years and an acceptance rate of 35 %. We also revealed that we managed to meet our ambition to inform authors about their manuscripts within three months for about two thirds of the manuscripts. Identifying the bottlenecks has subsequently led to new routines in the process. Increasing number of manuscripts prompted the decision to increase the number of issues per year from quarterly to bimonthly as of 2003 to prevent an increase in the backlog. Actuality has also considerably improved through the introduction of a PreView system as of 2004, implying that accepted manuscripts are available at the homepage of the journal (www.tandf.no/sjpublic) and are thus referable through a so called DOI number.

The rise in manuscripts has continued during 2003-2005 from 163 in 2003 to 251 in 2005. This has been accompanied by an increase in the rejection rate so that we now can only accept about 20%. We dare to say that the development is indicative of a quality improvement and we are pleased that it has been possible to further expand the space by increasing the number of pages per issue from 80 to 112 as of 2006. We attribute much of the credit for up-grading SJPH to our committed Editorial Board. As co-editors, they have taken part of the day-to-day work with us at the editorial office by sharing decisions about individual papers and they have been instrumental for policy development of the journal. During our annual board meetings we have launched new sections such as the Public Health Debate column and the Public Health Calendar, opened up for the possibility of submitting papers on Study Design and brought up topics for new Editorials and Supplements.

This year's Editorial Board meeting was hosted by the Editorial Office and held in Umeå in October 2005. Anne Bindslev from our publisher Taylor & Francis, Sakari Souminen, Bo Burström and P.O. Östergren from the Executive Board also participated in the meeting, specifically for discussing suggestions for changes in the ownership structure of the journal.

During 2005 we have started the process of entering into an electronic system for receiving, handling and reviewing manuscripts, the *Scholarone* system. This is as much a challenge as an opportunity for improvement, once we get fully on board. It will make possible a more detailed surveillance of our manuscript handling as well as a systematic characterisation of submitted papers and their outcome.

Editorial Board meeting in Umeå, October 2005

Meeting with the executive board and Taylor & Francis in Stockholm 2005

Table 7. Consultancy and advisory functions of staff members

Staff member	Function	Duration
Peter Byass	Editorial consultant to the Ethiopian Journal of Health Development	2002-
Curt Edlund	Co-ordinator of a national network in Research of Sickness (SPID)	1999-
Anneli Ivarsson	Member of the working group on Celiac disease within the Swedish Paediatric Associations Section Gastroenterology and Nutrition	1991-
	Member of the European Multi-stakeholder Platform of experts on Celiac disease prevention and treatment	2005
Urban Janlert	Chairman of SEEC-north (East Europe Committee of the Swedish Health Care Community)	1999-
	Chairman for the Swedish Association of Social Medicine	2002-
	Member of the scientific priority committee for the Swedish Council for Working Life and Social Science (FAS)	2005
Lars Lindholm	Board member of the National Expert Group on A Health Promoting Medical Service, organised by the National Public Health Institute	2003-
Maria Nilsson	Swedish representative in the advisory board of ENYPAT (European Network on Young People and Tobacco)	2000-
Lennart Nyström	Member of the Editorial Board of the Central African Journal of Medicine	2001-
	Member of the executive Board of the European Breast Cancer Network	1998-
	Swedish representative in the International Breast Screening Network (IBSN)	1997
Måns Rosén	Member of the scientific priority committee for public health of the Swedish Research Council	2000-
	Member of the Board of the Swedish Network for Pharmacoepidemiology	
	Member of the Scientific Advisory Board for the Swedish Council on Technology Assessment in Health Care	
	Member of the Advisory Committee to the European Commission for Statistics in the Economic and Social Spheres	
Miguel San Sebastian	Member of the editorial board of the International Journal of Occupational and environmental health	2005
Berndt Stenberg	Memberof the Swedish Contact Dermatitis Research Group	1986-
	Member of the executive group for the Swedish Dermato-Epidemiology Network	1995-
	Member of the executive group for the Swedish Psoriasis Network	2002-
	Country representative in the Council for the European Society for Contact Dermatitis (ESCD)	
Stig Wall	Board member of the Epidemiologic Centre at the National Board of Health and Welfare	1993-
	Board member of CHESS, Center for Health Equity Studies, Stockholm	1999-
	Permanent scientific adviser to the National Board for Health and Social Welfare	1987-
	Deputy chair of the Scientific Advisory Committee of INDEPTH, the International Network for Demographic Surveillance in Developing Countries	2003-
	Member of the editorial committee for the National Public Health Reports	1994, 1997, 2001, 2005
	Editorial consultant to the Ethiopian Journal of Health Development	2002-
	Member of the scientific priority committee for behavioural science and community medicine at the Bank of Sweden Fund	2005-
Lars Weinehall	Board member of the National Expert Group on A Health Promoting Medical Service, organised by the National Public Health Institute	2003-
	Medical coordinator for the Västerbotten Intervention Program	1985-
	Board member of the Västerbotten County Council Reference group for implementation of the National Public Health Policy	2004-

6. LIST OF PUBLICATIONS

Original articles

1. Ahlberg BM, Krantz I, Lindmark G, Warsame M. ”It is only a tradition”: Making sense of eradication and persistence of female “circumcision” within a Swedish context. *Critical Social Policy* 2005; 84: 584-7.
2. Alexandersson O, Bixo M, Högberg U. Evidence-based changes in term breech delivery practice in Sweden. *Acta Obstet Gynecol Scand* 2005; 84: 584-7.
3. Ali M, Asefaw T, Byass P, Beyene H, Pedersen FK. Helping northern Ethiopian communities reduce childhood mortality: population-based intervention trial. *Bull WHO* 2005; 83: 27-33.
4. Andersson M, Stecksén-Blicks C, Stenlund H, Ranggård L, Tsilingaridis G, Mejàre I. Detection of approximal caries in 5-year-old Swedish children. Caries Res 2005; 39: 92-99.
5. Barnekow-Bergkvist M, Hedberg G, Janlert U, Jansson E. Health status and health behaviour in men and women at the age of 34. *Eur J Public Health*. In press.
6. Björkenstam C, Edberg A, Ayoubi S, Rosén M. Are cancer patients at higher suicide risk than the general population? A nation wide register study in Sweden from 1965-1999. *Scand J Public Health*. *Scand J Public Health* 2005; 33: 208-14.
7. Bolinder J, Fernlund P, Borg H, Arnqvist HJ, Björk E, Blohmé G, Eriksson JW, Nyström L, Östman J, Sundkvist G. Hyperproinsulinemia segregates young adult patients with newly diagnosed autoimmune (type 1) and non-autoimmune (type 2) diabetes. *Scand J Clin Lab Invest* 2005; 65: 585-94.
8. Broeders MJ, Scharpantgen A, Ascunce N, Gairard B, Olsen AH, Mantellini P, Mota TC, Van Limbergen E, Seradour B, Ponti A, Trejo LS, Nyström L; European Breast Cancer Network. Comparison of early performance indicators for screening projects within the European Breast Cancer Network: 1989-2000. *Eur J Cancer Prev*. 2005; 14: 107-16.
9. Byass P, Fottrell E, Huong DL, Berhane Y, Corrah T, Kahn K, Muhe L, Van DD. Refining a probabilistic model for interpreting verbal autopsy data. *Scand J Public Health* 2006; 34: 26-31.
10. Byass P, Ghebreyesus TA. Making the world's children count. *Lancet* 2005; 365: 1114-6.
11. Collin P, Kaukinen K, Vogelsang H, Korponay-Szabò I, Sommer R, Schreier E, Volta U, Granito A, Veronesi L, Mascart F, Ocmant A, Ivarsson A, et al. Antiendomysial and antihuman recombinant tissue transglutaminase antibodies in the diagnosis of coeliac disease: a biopsy-proven European multicenter study. *Eur J Gastroenterol Hepatol* 2005;17:85-91.
12. Dahlquist GG, Pundziute-Lyckå A, Nyström L; Swedish Childhood Diabetes Study Group; Diabetes Incidence Study in Sweden (DISS) Group. Birthweight and risk of type 1 diabetes in children and young adults: a population-based register study. *Diabetologia* 2005; 48: 1114-7.
13. Dapi Nzefa L, Nouedoui C, Janlert U, Håglin L. Adolescent food habits and nutritional status in urban and rural areas in Cameroon, Africa. *Scand J Nutr* 2005;49:1-8.
14. Ellberg L, Persson M, Lundman B, Högberg U. The early discharge and family suite programs do not increase health care utilization after birth. *J Obstet Gynecol Neonatal Nursing* 2005; 34: 55-62.
15. Ellberg L, Högberg U, Lundman B, Lindholm L. Satisfying parents' preferences with regard to postnatal care is cost-minimizing. *Acta Obstet Gynecol Scand*. In press.
16. Emmelin M, Nafziger A, Stenlund H, Weinehall L, Wall S. Cardiovascular risk factor burden is a stronger predictor of self-rated poor health in adults in the U.S. than in Sweden, especially for the lower educated. *Scand J Public Health* 2006; 34: 140-49
17. Eriksson N, Stenberg G. Baseline prevalence of symptoms typical of non-specific environmental syndromes in the Swedish population. *Scand J Public Health*. In press.
18. Fantahun M, Fottrell E, Berhane Y, Wall S, Högberg U, Byass P. Assessing a new approach to verbal autopsy interpretation in a rural Ethiopian community: the InterVA model. *WHO Bull*. In press.
19. Feder G, Rohde JE, San Sebastian M, Janlert U, Jimba M, Materia E, Hurtig AK, Goldin S, Stafford T, Edvardsson B, Hilt B, Parkinson S, Birch M, Jones A, Archibald K, Pastore JO. Reed Elsevier and the international arms trade (letter). *Lancet* 2005; 366: 889.
20. Färnkvist L and Weinehall L. Assessment of intervention intensity: Experiences from a small-scale Swedish cardiovascular disease prevention programme. *Scand J Public Health*. In press.
21. Gao F, Nordin P, Krantz I, Chia KS, Machin D.Variation in the seasonal diagnosis of acute

lymphoblastic leukemia: evidence from Singapore, the United States, and Sweden. *Am J Epidemiol 2005;* 162: 753-63.

22. Hagberg L, Lindholm L. Is promotion of physical activity a wise use of societal resources? Issues of cost-effectiveness and equity in health. *Scand J Med Sports* 2005; 15: 304-12.

23. Hagberg L, Lindholm L. Cost-effectiveness of health care based interventions aimed at improving physical activity. *Scand J Public Health*. In press.

24. Haglund B, Köster M, Rosén M. Inequality in access to coronary revascularisation in Sweden. *Scand Cardiovascular J*. In press.

25. Hammarström A, Janlert U. An agenda for unemployment research – a challenge for public health. *Int J Health Service.* 2005; 35: 765-77.

26. Hammarström A, Janlert U. Health selection in a 14-year follow-up study--a question of gendered discrimination? *Soc Sci Med* 2005; 61: 2221-32.

27. Hang HM, Bach TT, Byass P. Unintentional injuries over a 1-year period in a rural Vietnamese community; describing an iceberg. *Public Health* 2005; 119: 466-73.

28. Hansen AJ, Edlund C, Bränholm I-B. Significant resources needed for return to work after sick leave. *Work* 2005; 25: 231-40.

29. Hansen A.J, Edlund C, Bränholm I-B. Life satisfaction, sense of coherence, coping resources and locus of control in a group of persons on sick leave and return to work. *Work*. In press.

30. Hansen A.J, Edlund C, Henningsson M. Factors releveant to a return to work: a multivariarate approach. Accepterad för publicering i *Work*. In press

31. Hansen Falkdal A, Edlund C, Dahlgren L. Experiences within the process of sick leave. Scand J Occup Therapy. In press.

32. Hartini TN, Padmawati RS. Lindholm L, Surjono A, Winkvist A. The importance of eating rice: changing the food habits among pregnant Indonesian women during the economic crisis. *Soc Sci Med* 2005; 61: 199-210.

33. Herrera A, Dahlblom K, Dahlgren L, Kullgren G. Pathways to suicidal behaviour among adolescent girls in Nicaragua. *Soc Sci Med* 2005; 62: 805-14.

34. Huong DL, Minh HV, Janlert U, Van DD, Byass P. Socioeconomic status inequality and major cause of death in adults: a 5 - year follow – up study in rural Vietnam. *Public Health* 2006 (Accepted for publication).

35. Hurtig AK, San Sebastian M. Epidemiology vs epidemiology: the case of oil exploitation in the Amazon basin of Ecuador. *Int J Epidemiol* 2005; 34: 1170-2.

36. Hurtig AK, San Sebastián M. The People´s Health Movement: what is it and should we care? *Scand J Public Health* 2005; 33: 236-8.

37. Högberg U, Wang M. SSRI under graviditet och fetal neurotoxicitet – följ försiktighetsprincipen och sök om möjligt andra behandlingsalternativ under graviditet. *Läkartidningen* 2005; 102: 113-5.

38. Högberg U. The World Health Report 2005: "make every mother and child count" - including Africans. *Scand J Public Health* 2005; 33: 409-11.

39. Hörnsten Å, Lundman B, Stenlund H, Sandström H. Metabolic improvement after intervention focusing on personal understanding in type 2 diabetes. *Diab Res Clin Pract* 2005; 68: 65-74.

40. Ivarsson A. The Swedish epidemic of coeliac disease explored using an epidemiological approach--some lessons to be learnt. *Best Pract Res Clin Gastroenterol* 2005; 19: 425-40.

41. Johansson L, Stenlund H, Lindqvist P, Eriksson A. A survey of teenager unnatural deaths in northern Sweden 1981-2000. *Accidt Anal Prev* 2005; 37: 253-8.

42. Johansson P, Tillgren P, Guldbrandsson K, Lindholm L. A model for cost-effectiveness analyses of smoking cessation applied to a Quit-and-Win contest. *Scand J of Public Health* 2005; 33: 343-52.

43. Janson C, Norbäck D, Omenaas E, Gislason T, Nyström L, Jõgi R, Lindberg E, Gunnbjörnsdottir M, Norrman E, Wentzel-Larsen T, Svanes C, Jensen EJ, Torén K, on behalf of the RHINE study group. Insomnia is more common among subjects living in damp buildings. *Occup Environ Med* 2005; 62: 113-8.

44. Karling M, Stenlund H, Hägglöf B. Behavioural changes after anaesthesia: Validity and liability of the Post Hospitalization Behaviour Questionnaire in a Swedish paediatric population. *Acta Pediatr* 2006; 95: 340-6.

45. Krantz I, Sachs L, Ahlberg B, Nordin P, Nilstun T. Oetiskt att i dagens kunskapsläge införa PSA-screening för prostatacancer. *Läkartidningen* 2005; 102: 2498-500.

46. Krantz I, Nordin P, Maesel J, Lindström Å, Eriksson B. Sjuksköterskor kan ta över enklare varianter av gråstarrsoperationer. Debattartikel, *Dagens Medicin* 2005; (12): 4.

47. Kwesigabo G, Killewo J, Urassa W, Lugalla J, Emmelin M, Mutembei A, Mhalu F, Biberfeld G, Wall S, Sandstrom A. HIV-1 infection prevalence and incidence trends in areas of contrasting levels

of infection in the Kagera region, Tanzania, 1987-2000. *J Acquir Immune Defic Syndr* 2005; 40: 585-91.

48. Källestål C. The effect of five years' implementation of caries-preventive methods in Swedish high-risk adolescents. *Caries Res* 2005; 39: 20-6.

49. Källestål C, Dahlgren L, Stenlund H. Oral health behaviour and self-esteem over four years in Swedish adolescents. *J Adolescent Health* (accepted).

50. Källestål C, Swanberg I. Part 2: An inventory of Swedish public health research. *Scand J Public Health* Suppl 65, 2005; 33: 17-45.

51. Löfroth E, Lindholm L, Wilhelmsen L, Rosen M. Optimising health care within given budgets: Primary prevention of cardiovascular disease in different regions of Sweden. *Health Policy* 2006; 75: 214-29.

52. Löwhagen GB, Berntsson M, Bonde E, Tunbäck P, Krantz I. Acceptance and outcome of herpes simplex virus type 2 antibody testing in patients attending an STD clinic - recognized and unrecognized infections. *Acta Derm Venereol* 2005; 85: 248-52.

53. Majoko F, Nyström L, Munjanja S, Mason E, Lindmark G. Does maternity care improve pregnancy outcomes in women with previous complications? A study from Zimbabwe. *Trop Doct* 2005; 35: 195-8.

54. Majoko F, Nyström L, Munjanja SP, Lindmark G. Effectiveness of referral system for antenatal and intra-partum problems in Gutu district, Zimbabwe. *J Obstet Gynaecol* 2005; 25: 656-61.

55. Mearin ML, Ivarsson A, Dickey W. Coeliac disease: is it time for mass screening? *Best Pract Res Clin Gastroenterol* 2005; 19: 441-52.

56. Mogren I, Pohjanen A. Low back pain and pelvic pain during pregnancy - prevalence and risk factors in a Swedish cohort. *Spine* 2005; 30: 983-91.

57. Mogren I. Previous physical activity decreases the risk of low back pain and pelvic pain during pregnancy. *Scand J Public Health* 2005; 33 300-6.

58. Mogren I. Perceived health, sick leave, psychosocial situation and sexual life, in women with low back pain and pelvic pain during pregnancy. *Acta Obstet Gynecol Scand.* In press.

59. Mogren IM. BMI, pain and hyper-mobility are determinants of long-term outcome for women with low back pain and pelvic pain during pregnancy. *Eur Spine J.* In press.

60. Månsdotter A, Lindholm L, Lundberg M. Health, wealth and fairness based on gender: The support for ethical principles. *Soc Sci Med.* In press.

61. Nawi Ng, Minh HV, Tesfaye F, Bonita R, Byass P, Stenlund H, Weinehall L, Wall S. Combining risk factors and demographic surveillance: Potentials of WHO STEPS and INDEPTH methodologies for assessing epidemiological transition. *Scand J Public Health* 2006; 34: 199-208.

62. Norberg M, Stenlund H, Lindahl, B, Boman K, Weinehall L. Contribution of Swedish moist snuff to the metabolic syndrome – a wolf in sheep's clothing. *Scand J Public Health*. Accepted.

63. Nordström, A., Kullgren, G. & Dahlgren, L. Scizophrenia and crime: The experience of parents. *Int J Law Psychiatry* 2006; 29: 57-67.

64. Nystedt A, Högberg U, Dejin-Karlsson E, Lundman B. Low psychosocial resources during early pregnancy are not associated with prolonged labour. *Eur J Obstet Gynecol.* In Press.

65. Nystedt A, Högberg U, Lundman B. The negative birth experience of prolonged labour. A case referent study. *J Clin Nursing* 2005; 14: 579-86.

66. Nystedt A, Högberg U, Lundman B. Women's experiences of prolonged labour. *Midwifery*. In press.

67. Nystedt A, Lundman B, Högberg U. Response to Rosemary Mander's comment of a reductionistic approach towards prolonged labour. *J Clin Nursing.* In press.

68. Nyrén, M, Lindberg M, Stenberg B, Svensson M, Svensson Å, Meding B. do es childhood eczema influence a person's future working life? *Scand J Work Environ Health* 2005; 31: 474-8.

69. Panday S, Reddy SP, Ruiter RAC, Bergström E, de Vries H. Determinants of smoking cessation among adolescents in South Africa. *Health Educ Res* 2005; 20: 586-99.

70. Petruskiene V, Falk M, Waernbaum I, Norberg M, Eriksson JW. The risk for venous thromboembolism is markedly elevated in diabetes patients. *Diabetologia*. In press.

71. Poggensee G, Krantz I, Nordin P, Mtweve S, Ahlberg B, Mosha G, Freudenthal S. A six-year follow-up of schoolchildren for urinary and intestinal schistosomiasis and soil-transmitted helminthiasis in Northern Tanzania. *Acta Trop* 2005; 93: 131-40.

72. Ringbäck Weitoft G, Rosén M. Is perceived nervousness and anxiety a predictor of premature mortality and severe morbidity? A longitudinal follow up of the Swedish survey of living

conditions. *J Epidemiol Community Health* 2005; 59: 794-8.

73. Rosén M, Haglund B. From healthy to sick survivors. Implications for the 21st century. *Scand J Public Health* 2005; 33: 151-55.

74. Rönmark, E, Andersson C, Nyström L, Forsberg B, Järvholm B, Lundbäck B. Obesity increases the risk of incident asthma among adults. *Eur Respir J* 2005; 25: 282-8.

75. Sahlin C, Svanborg E, Stenlund H, Franklin KA. Cheyne-Stokes respiration and supine dependency. *Eur Respir J* 2005; 25: 829-33.

76. San Sebastian M, Hurtig AK. Oil development and health in the Amazon basin of Ecuador: the popular epidemiology process. *Soc Sci Med* 2005; 60: 799-807.

77. San Sebastian M, Hurtig AK, Breilh J, Peralta AQ. [The People's Health Movement: health for all now.] *Revista Panamericana de Salud Publica* 2005; 18: 45-9. In Spanish.

78. San Sebastián M, Hurtig AK. A new leadership for UNICEF: do values matter? (letter) *Lancet* 2005; 365: 1136-7.

79. Shaheen R, Lindholm L. Quality of life among pregnant women with chronic energy deficiency in Bangladesh. *Health Policy*. In press.

80. Smith RA, Caleffi M, Algert U-S, Chen THH, Duffy SW, Franceschi D, Nyström L, for the Global Summit Early Detection and Access to Care Panel. Breast cancer in limited-resource countries: earl detection and access to care. *The Breast Journal* 2006; 12 (Suppl 1): 16-26.

81. Stegmayr BG, Brännström M Bucht S, Crougneau V, Dimeny E, Ekspong A, Eriksson M, Granroth B, Gröntoft KC Hadimeri H, Holmberg B, Ingman B Isaksson B, Johansson G, Lindberger K, Lundberg L, Mikaelsson L, Olausson E, Persson B, Stenlund H, Wikdahl AM, for the Nediat study group. Low-dose atorvastatin in severe chronic kidney disease patients: A randomized, controlled endpoint study. *Scand J Urol Nephrol* 2005; 39: 489-97.

82. Stenhammar L, Högberg L, Danielsson L, Ascher H, Dannaeus A, Hernell O, Ivarsson A, Lindquist B, Nivenius K. How do Swedish paediatric clinics diagnose coeliac disease? *Acta Paediatr*. In press.

83. Svanes C, Gomez Real F, Gislason T, Jansson C, Jögi R, Norrman E, Nyström L, Torén K, Omenaas E. Association of asthma and hay fever with irregular menstruation. *Thorax* 2005; 60: 445-50.

84. Svensson M, Nyström L, Schön S. Dahlquist G. Age at onset of childhood-onset type 1 diabetes and the development of end-stage renal disease. A nationwide population-based study. *Diabetes Care* 2006; 29: 538-42.

85. Thanh NX, Hang HM, Chuc NTK, Byass P, Lindholm L. Does poverty lead to non-fatal uintentional injuries in rural Vietnam? *Int J Injury Control Safety Promotion* 2005; 12: 31-7.

86. Thanh NX, Hang HM, Chuc NT, Rudholm N, Emmelin A, Lindholm L. Does "the injury poverty trap" exist? A longitudinal study in Bavi, Vietnam. *Health Policy*. In press.

87. Tillberg A, Berglund A, Mårell L, Bergdahl J, Eriksson N, Lindén G, Stenberg B, Widman L. Changes in health over time in patients with symptoms allegedly caused by their dental restorative materials. *Community Dent Oral Epidemiol* 2005; 33: 427-37.

88. Törnberg S, Kemetli L, Svane G, Rosen M, Stenbeck M, Nyström L. Pattern of participation in a cohort aged 50-60 years at first invitation to the service-screening programme with mammography in Stockholm county, Sweden. *Prev Med* 2005; 41: 728-33.

89. Urassa DP, Carlstedt A, Nyström L, Massawe SN, Lindmark G. Are process indicators adequate to assess essential obstetric care at district level? – a case study from Rufiji district, Tanzania. *Afr J Reprod Health* 2005; 3: 100-11.

90. Uttjek M, Dufaker M, Nygren L, Stenberg B. Psoriasis care consumption and expectations from a gender perspective in a psoriasis population in northern sweden. *Acta Derm Venereol* 2005; 85: 503-8.

91. Valladares E, Peña R, Persson LÅ, Högberg U. Violence against pregnant women: prevalence and characteristics. A population-based study in Nicaragua. BJOG 2005; 112: 1243-8.

92. Van Minh H, Byass P, Chuc NT, Wall S. Gender differences in prevalence and socioeconomic determinants of hypertension: findings from the WHO STEPs survey in a rural community of Vietnam. *J Hum Hypertens* 2006; 20: 109-15.

93. Yohannes M, Haile M, Ghebreyesus TA, Witten KH, Getachew A, Byass P, Lindsay SW. Can source reduction of mosquito larval habitat reduce malaria transmission in Tigray, Ethiopia? *Trop Med Int Health* 2005; 10: 1274-85.

94. Åkesson K, Nyström L, Färnkvist L, Östman J, Lernmark Å, Kockum I and the DISS study group. Increased risk of diabetes among relatives of female insulin-treated patients diagnosed at 15-34 years of age. *Diabetic Med* 2005; 22: 1551-7.

95. Öhman A. Qualitative methodology for rehabilitation research. *J Rehabil Med* 2005 ; 37: 273-80.

96. Öhman A, Hägg K, Dahlgren L. A stimulating, practicebased job facing increased stress – clinical supervisors' perceptions of professional role, physiotherapy education and the status of the profession. *Advances in Physiotherapy* 2005; 7: 114-122.

Books and other publications

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100. Hurtig A-K, Porter JDH, Ogden JA. Tuberculosis control and directly observed therapy from the public health / human rights perspective: In: Perspective son health and human rights. Gruskin S (ed.). Routhledge, New York, 2005.

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103. Mearin LM, Ivarsson A, Dickey W. Celiac disease: Is it time for mass screening? In: Mulder C, Cellier C. Coeliac disease. *Best practice & research - Clinical Gastroenterology* (in press).

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105. Nilsson M. Tonåringar om tobak –vanor, kunskaper och attityder. Stockholm. Statens folkhälsoinstitut 2005:32

106. Rosén M, Hakulinen T. Use of disease registers. Pp 231-251. Chapter 1.4 in Ahrens W, Pigeot I (eds.) Handbook of Epidemiology, Berlin, Heidelberg – Verlag; 2005.

107. Rydevik B, Brodda-Jansen G, Edlund C, Grane P, Hildingsson C, Karlberg M, Link H, Måwe U, Portala K, Sterner, Y Diagnostik och tidigt omhändertagande av whiplashskador, Svenska Läkarsällskapets och Whiplashkommisionens medicinska expertgrupp, Whiplashkommisionen och Svenska Läkarsällskapet, Stockholm 2005.

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136. Norberg M, Stenlund H, Lindahl B, Andersson C, Weinehall L, Hallmans G, Eriksson JW. Clusters of components of the metabolic syndrome and adipose-derived mediators in prediction of future type 2 diabetes mellitus – no independent role of inflammation or dyslipidemia.

137. Nurdiati DS, Stenlund H, Hakimi M, Wulff M, Winkvist A, Högberg U. Time to pregnancy: a population-based study in rural Central Java, Indonesia.

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