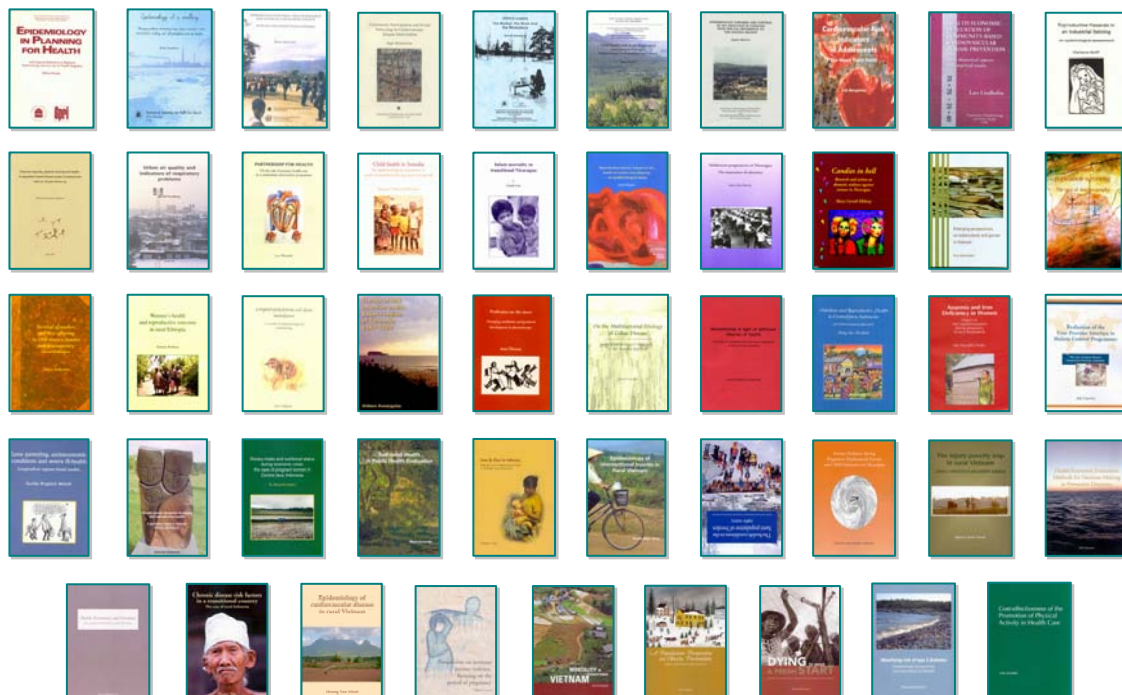


Umeå International School of Public Health  
**Epidemiology and Public Health Sciences**

Department of Public Health and Clinical Medicine

# Annual Report 2006





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- **News**
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- **Research**
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Epidemiological studies address health problems identified at the hospital, in the community or at the political level of society. The purposes are to study the distribution and causes of these problems, ultimately aiming at their prevention. Studies may concern register-based data on environmental factors and diseases, the social patterning of health and disease but also the evaluation of interventions in the community. Our activities in research and teaching have a double perspective - on one hand they are based in local public health work in Sweden, on the other they have a global Third world focus, eg on HIV in Tanzania, child mortality in Ethiopia or domestic violence in Nicaragua.

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# Annual Report 2006

Umeå International School of Public Health  
Epidemiology and Public Health Sciences



## Foreword

This special issue of the Annual Report from Epidemiology and Public Health Sciences at Umeå University presents our division as well as our public health research and our educational work. We are happy to present to the reader how we have developed over the past two decades. We celebrated the 20<sup>th</sup> anniversary during 2006. This is elaborated on by Professor Stig Wall in chapter 1.

The production of the Annual Report is not one person's work, but a joint venture in that everybody at the division has contributed with texts, figures and up-dates. Therefore, I want to thank all the staff for your contributions and kind support.

However, it takes more than that to transform every single part into a publication like this. I will therefore, on behalf of everybody at the division, express my deep gratitude to the editorial committee consisting of Lena Mustonen, Klas-Göran Sahlén and Kerstin Edin. Without your persistent calls to everybody to submit their contributions, your excellent ideas on layout and your thorough final review, this would not have been possible to achieve.

Umeå, May 2007

Ann Öhman  
Editor-in-Chief  
Deputy Head of Division



# Contents

page

PhD events during 2006.....	1
Other events and personal columns .....	12
<b>1. Epidemiology and Public Health Sciences – 20th Anniversary Celebrations..</b>	<b>18</b>
Epiph 1986-2006, a look back into the future .....	18
Highlights of the 20- years celebration.....	21
<b>2. Institutional setting .....</b>	<b>30</b>
Organisation.....	30
Staff development.....	30
Budget.....	32
Progress .....	33
Staff .....	40
<b>3. On-going Swedish and international studies.....</b>	<b>43</b>
Public health and the epidemiological transition.....	44
Smoking prevention – a global, national and regional mission .....	52
Gender based violence .....	54
Reproductive health.....	55
Chronic diseases in children and adults.....	56
The occupational and living environment.....	57
The ultimate goal - prevent illhealth .....	60
Ageing and Living Conditions .....	67
Multi-disciplinary gender research .....	67
<b>4. Training at Umeå International School of Public Health .....</b>	<b>70</b>
Master of Public Health Programme .....	70
Summer course: Epidemiology and Field Research Methods .....	73
Research training.....	74
Single courses .....	74
Biomedical programme.....	74
UISPH involvement in teaching outside Sweden .....	74
<b>5. Advocacy .....</b>	<b>79</b>
Consultancy and advisory functions .....	79
Scandinavian Journal of Public Health.....	79
<b>6. Publications.....</b>	<b>81</b>
Original articles .....	81
Books and other publications .....	85
Submitted articles.....	86
Doctoral theses 1987-2007.....	88
Licentiate theses 1994-2006 .....	89
Public Health Report Series 2006.....	90
MFS-reports 2006 .....	91



## PhD events during 2006

Nils Oscarson



Anna Månsdotter



Nawi Ng



Hoang Van Minh



### Kerstin Edin



### Dao Lan Huong



### Anne Nafziger



### Kathleen Kahn



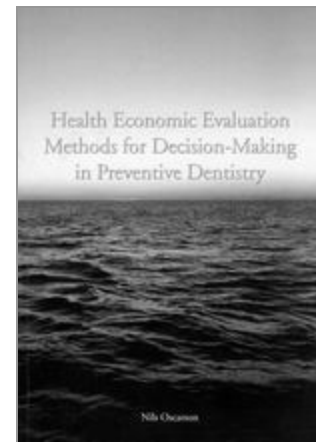
## Nils Oscarson

### Health economic evaluation methods for decision-making in preventive dentistry

Supervisors: Carina Källestål

Thesis defended: 1 March 2006

Opponent: Professor Dorthe Holst, Seksjon for samfunnsodontologi, University of Oslo, Norway



The aims of this thesis were to evaluate caries-preventive measures from a societal perspective, to demonstrate the use of resources in preventive dentistry, to develop and discuss techniques suitable for evaluating dental care costs and outcomes, and to test costs and consequences within a health economic decision model adapted to preventive dental care.

The thesis is based on three separate studies with three separate cohorts. In the first study, performed at a single dental clinic, analysis was made of data on dental caries progression over four years in 92 adolescents, along with the use of resources for preventive treatment. In the second study, data from the intervention study “Evaluation of caries-preventive measures” (performed between 1995 and 1999 at 26 dental health clinics throughout Sweden) were used for economic evaluation. Three different approaches to calculating unit cost were discussed, each of which reflect the differences in treatment costs as influenced by the practitioner’s level of skill and competence (salary) and by methods of handling overhead cost allocation. These methods seem useful for evaluating costs in cost-effectiveness analysis (CEA) and cost-benefit analysis (CBA). The CEA showed an incremental cost-effectiveness over four years of SEK 2 043\* per averted decayed (D) enamel (e) and dentine caries, missing (M) and filled (F) surface (S) (DeMFS). In the third study, 82 19-year-old individuals agreed to participate in a pilot exploratory case-control study. Individuals with high caries experience formed the test group while the control group consisted of individuals with no caries experience. To explore whether any differences existed between these two groups in perceived oral health-related quality of life (OHRQOL), two OHRQOL measures were used. Additionally, the willingness of these individuals to pay (WTP) for a preventive strategy was elicited using the contingent valuation method (CVM) within a cost-benefit approach. Using these WTP values, the cost-benefit analyses showed positive net social benefit (NSB) values for both study groups, meaning that the benefits of prevention exceeded the costs. A new outcome measure, Value of Statistical Oral Health (VOSOH), was also presented.

Consideration was also made, within the economic framework fundamental to this thesis, of the trend away from a strictly bio-medical paradigm towards a biopsychosocial perspective. The health economic decision model encompasses a number of different techniques for comparing costs with consequences, each with its own advantages and disadvantages and each with its own field of application. These techniques should be seen as complementary rather than competing. Preventive dentistry plays a central role in Swedish dental health care, and it is important that resources are used properly. Accurate evaluation methods are necessary in order to improve the basis for public decision-making; the methods proposed in this thesis seem to be of potential use in this endeavour.

## Anna Månsdotter

### Health, Economics and Feminism - on judging fairness and reform

Supervisors: Lars Lindholm, Anna Winkvist and Ann Öhman

Thesis defended: 7 April 2006

Opponent: Professor Finn Diderichsen, Department of Public Health Science, University of Copenhagen, Denmark



**Introduction:** The point of departure in this thesis is that women live longer than men, while men have more power, influence and resources, and probably better health-related quality of life, than women. In order to judge and act from this situation, the classical idea that both facts and values are needed for conclusion is adopted. The diverse positions of the sexes are mainly assumed to depend on the gender system, i.e. the societal structure organising human activities and relations, ultimately privileges and burdens, by sex. Hence, abolition of gender is held to be associated with decreased differences in health. The handling of facts and values is divided into two principal questions: 1) how to compare women and men within a particular state of the world, and 2) how to choose from their positions between states.

**Aims:** The overall aim is to propose a public health framework for judging fairness and change from the positions of women and men. The specific aims are to: illustrate how the choice of normative approach affects judgements on fairness and resource allocation (I), explore public health views regarding various ethical principles (II), study the relationship between aspects of gender equality in public/domestic and health (III), estimate costs, savings and health gains, associated with the Swedish parental insurance reform (IV).

**Methods:** The methods used are: ethical analysis based on the normative theories of welfarism, extrawelfarism, egalitarianism, and feminism; and the notions of justice by separate spheres, equity as choice and attainment/shortfall principles (I), survey among public health workers regarding within-state and between-states ethical views (II), epidemiologic study on death and sickness leave among traditional, equal, and untraditional Swedish couples who had their first child in 1978 (III), cost-effectiveness analysis based on men who took paternity leave 1978-1979 (IV).

**Results:** The selected normative theories are likely to claim different opinions on fairness regarding women and men, and different proposals on resource allocations (I). Most public health workers support the idea of judging fairness by separate spheres, end-points, and shortfall equity. The rejection of health maximisation, and support for equality in life span and income, are convincing; although females and males differ significantly in judging societal change (II). In comparison to being equal in the public sphere, traditional women have lower risks of death and sickness, while traditional men tend to have higher risks. Being equal in the domestic sphere seems to be associated with lower risks among both sexes (III). Men who took paternity leave run significant lower death risks than other men. Base case cost-effectiveness of the reform is 6,000 EUR, and worst case 40,000 EUR, per gained QALY (IV).

**Conclusions:** A public health framework for judging fairness and reform by women and men could look as follows: 1) identify facts at present and from past, 2) ask whether the situation is fair by within-state rules, 3) claim or refuse change, 4) identify consequences from reform, 5) consider whether the change was satisfying by between-states rules. The gains from more ethical analyses of public health based on sex/gender should overcome the many tricky issues involved. Since there is no common understanding on how to judge fairness and change from female/male differences in health and wealth, added research and exchange of views are called for. At Swedish state of gender (in)equality, it seems public health relevant to support further similarity in child-care. Provided an effective fraction of 25 percent, the entitlement to paternity leave is probably approved of by common welfarist, egalitarian, and feminist goals.

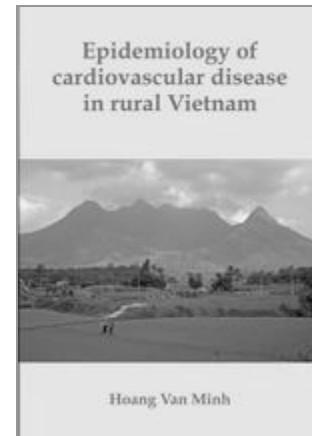
## Hoang Van Minh

### Epidemiology of cardiovascular disease in rural Vietnam

Supervisors: Nguyen Thi Kim Chuc, Peter Byass, Stig Wall

Thesis defended: 19 April 2006

Opponent: Professor Cairns Smith, Department of Public Health,  
University of Aberdeen, Scotland



In the context of transitional Vietnam, although cardiovascular disease (CVD) has been shown to cause a large burden of mortality and morbidity in hospitals, little is known about the magnitude of its burden, risk factor levels and its relationship with socio-demographic status in the overall population. This thesis provides a preliminary insight into population-based knowledge of the CVD epidemiology in rural Vietnam and contributes to the development of methodologies for monitoring it. The ultimate goal of the work is to facilitate the formulation of evidence-based health interventions for reducing the burden of the CVD epidemic in Vietnam and elsewhere.

This work was located in Bavi district, a rural community in the north of Vietnam. Studies on cause-specific mortality and risk factors were conducted within the framework of an ongoing Demographic Surveillance System (DSS) (called FilaBavi). The cause-specific mortality study used a verbal autopsy (VA) approach to identify causes of death in FilaBavi during 1999-2003. The risk factor study, conducted in 2002, employed the WHO STEPwise approach to surveillance of non-communicable disease (NCD) risk factors (WHO STEPS).

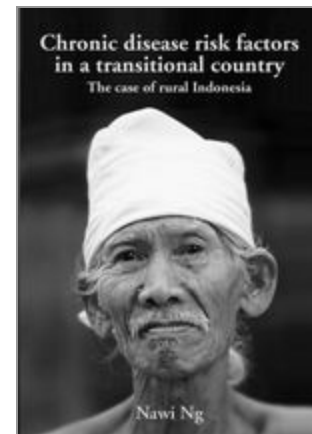
Findings indicated that Bavi district, as an example of rural Vietnam, was already experiencing high rates of CVD mortality and associated risk factors. Mortality results indicated a substantial proportion of deaths due to CVD, which was the leading cause of death (20% and 25.7% of total mortality in 1999 and 2000, respectively and 32% of adult deaths during 1999-2003), exceeding infectious diseases. Hypertension was found to be a serious problem in terms both of its magnitude (14% of the population) and widespread unawareness (82% of the hypertensives). Smoking prevalence was very high among men (58% current daily smokers) and might be expected to cause a considerable number of future deaths without urgent action. CVD mortality and some risk factors seemed to be rising among disadvantaged groups (women, less educated people and the poor). The combination of DSS and WHO STEPS methodologies was shown to have potential for addressing basic epidemiological questions as to how NCD and CVD mortality and associated risk factors are distributed in populations.

Given this evidence, actions to prevent CVD in Bavi and similar settings are clearly urgent. Interventions should be comprehensive and integrated, including both primary and secondary approaches, as well as policy-level involvement. Further studies, continuing on similar lines, plus qualitative approaches and deeper cross-site comparisons, are also needed

## Nawi Ng

### Chronic disease risk factors in a transitional country. The case of rural Indonesia

Supervisors: Lars Weinehall, Hans Stenlund, Ann Öhman, Stig Wall, Mohammad Hakimi  
Thesis defended: 19 April 2006  
Opponent: Professor Cairns Smith, Department of Public Health, University of Aberdeen, Scotland



Background: The epidemic of chronic diseases is largely neglected. Although a threatening burden of chronic diseases is emerging, developing public health efforts for their prevention and control is not yet a priority for trans-national and national health policy makers. Understanding the population burden of risk factors which predict chronic diseases is an important step in reducing the impact of the diseases themselves.

Objective: This thesis responds to the increasing burden of chronic diseases worldwide, and aims to illustrate the gap in chronic disease risk factor research in developing countries. The thesis describes and analyses the distribution of chronic disease risk factors in a rural setting in Indonesia. It also describes how smoking, one of the most common risk factors, is viewed by rural Javanese boys. Ultimately, therefore, this thesis aims to contribute to policy and programme recommendations for community interventions in a rural setting in Indonesia

Methods: The studies were conducted in Purworejo District, where a Demographic Surveillance System (DSS) has been running since 1994. The Purworejo DSS is part of the INDEPTH network (International Network of field sites for continuous Demographic Evaluation of Populations and Their Health in developing countries). Two representative cross-sectional studies (in 2001 and 2005) were conducted to assess the chronic disease risk factors (including smoking, elevated blood pressure, and overweight and obesity). The first cross-sectional study was followed up in 2002 and 2004. In each study, a total of 3 250 participants (approximately 250 individuals in each sex and age group among 15–74 year olds stratified into 10-year intervals) were randomly selected from the surveillance database from each enumeration area in the surveillance area. Instruments were adopted from the WHO STEPS survey and adapted to local setting. Since many Indonesians start to smoke at an earlier age, a qualitative study using a focus group discussion approach was conducted among school boys aged 13-17 years old to describe and explore beliefs, norms, and values about smoking in a rural setting in Java.

Result: Both the rural and urban populations in Purworejo face an unequal distribution of risk factors for chronic diseases. The burden among the most well-off group in the rural area has already reached a level similar to that found in the urban area. Most of the risk factors increased in all age, sex and socioeconomic groups during the period of 2001 to 2005. However, women and the poorest group experienced the greatest increase in risk factor prevalence. The qualitative study showed that cultural resistance against women smoking in Indonesia remains strong. Smoking is being viewed as a culturally internalised habit that signifies transition into maturity and adulthood for boys. Smoking is utilised as a means for socialisation and signifies better socioeconomic status. The use of tobacco in the construction of masculinity underlines the importance of gender specific interventions. National tobacco control policy should emphasise a smoking free society as the norm, especially among boys and men, and regulations regarding the banning of smoking should be enforced at all levels and areas of the community.

Within the demographic surveillance setting, it is possible to assess the population and health dynamics. Utilisation of a standardised methodology across sites in INDEPTH will produce comparable population-based data in developing countries. Such comparisons are important in global health. A comparison of smoking transition patterns between a Vietnamese DSS and an Indonesian DSS shows that Indonesian men started smoking regularly earlier and ceased less than Vietnamese men. Compared with Vietnam,

which has already signed and ratified the Framework Convention on Tobacco Control, tobacco control activities in Indonesia are still deficient.

**Conclusion:** The thesis concludes that the rural population is not spared from the emerging burden of chronic disease risk factors. The patterning of risks across different socioeconomic groups provides a macro picture of the vicious cycle between poverty and chronic diseases. Understanding of risk factors in a local context through a qualitative study provides insight into cultural aspects relating to risk factor adoption, and will allow the fostering and tailoring of culturally appropriate interventions. Combining data from demographic surveillance sites with the WHO STEP approach to chronic disease risk factor Surveillance addresses basic epidemiological questions on chronic diseases. The use of such data is a powerful advocacy tool in public health decision-making for chronic disease prevention in developing countries. With substantial existing evidence on the effectiveness of chronic disease prevention and intervention programmes, it is vital that Indonesia to starts planning intervention programmes to control the impending chronic disease epidemic, and most importantly, to translate all this evidence into public health action.

**Keywords:** chronic disease, risk factor, demographic surveillance system, smoking, elevated blood pressure, overweight and obesity, population-based intervention

## Kerstin Edin

### **Perspectives on intimate partner violence, focusing on the period of pregnancy**

Supervisors: Ulf Högberg, Lars Dahlgren and Ann Lalos

Thesis defended: 22 September, 2006

Opponent: Professor Margareta Hydén, Linköping University, Linköping



The aim of this thesis was to examine - from different perspectives - intimate partner violence (IPV) against women, focusing on the period of pregnancy, with the object of increasing the available knowledge about this complex subject area, in a Swedish context.

The specific aims were: i) to assess the experience, knowledge, attitudes and routines of midwives working in antenatal care regarding IPV against pregnant women; ii) to explore discourses with special reference to IPV, gender and the period of pregnancy of professionals running various intervention programs for men inclined to violence (outside or within the treatment of offenders); and iii) to illuminate experiences in women subjected to IPV by analyzing their stories about becoming and being pregnant as well as meeting antenatal care providers.

Three studies were carried out using a combination of quantitative and qualitative methods. Questionnaires sent to all midwives working at antenatal care clinics in the county of Västerbotten were processed by statistical methods and content analysis. The qualitative research interviews followed the 'grounded theory', 'discourse analysis' or 'narrative analysis' approach.

The results indicate the complexity of the problem of IPV from the viewpoints of both professional actors and the women. The midwives, although knowledgeable about IPV and certainly experts on pregnancy, felt uncertain regarding IPV and rarely asked direct questions of pregnant women, because the midwives perceived the subject to be difficult and taboo and they lacked guidelines to help them tackle the issue. The professionals in men's programs intended men to take full responsibility for their own violent behavior. They viewed violent men as rather ordinary but yet deviant in certain respects such as in interplay, communication, relationships and in their views of women. The professionals described gender stereotypes and attributed and generalized certain masculine characteristics to aggressiveness. They also believed that pregnancy could be a potential trigger for conflicts and violence. Nevertheless, pregnancy and sensitive relational topics did not constitute significant parts of the intervention programs. Despite good intentions to change concepts of masculinity, the professionals' discourses appeared to be rather lacking in reflection and even counter-productive. The women who had been subjected to violence described their complex lives as being terrible nightmares where their lovers turned into perpetrators. Two of the nine interviewed women left their relationships during pregnancy because of life-threatening violence whereas the others mostly kept up a front, hiding the IPV from the antenatal care staff and others while they trod a fine line between hope and despair or waited for the right moment to leave.

In addition to women's stories about IPV during pregnancy, two professional groups presented shared dilemmas regarding taboos and sensitive matters outside ordinary practice. Midwives were proficient but had no action plan to recognize and meet the complexity of the abused pregnant women's situation involving concealment, balancing and decision-making. Professionals in programs for men were explicitly confronting men's violence and wanted also to challenge masculinity in their clients. However, their discourse lacked depth by, for instance, their overlooking of sensitive relational topics in dialogues with men.

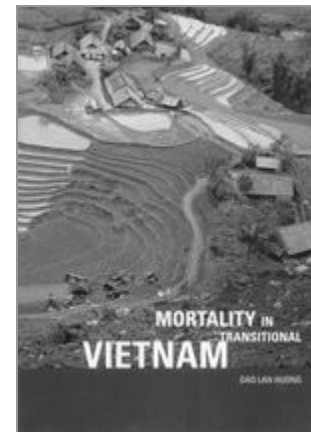
## Dao Lan Huong

### Mortality in transitional Vietnam

Supervisors: Peter Byass, Urban Janlert

Thesis defended: 19 October, 2006

Oponent: Professor Hans Rosling, Division of International Health, Department of Public Health Sciences, Karolinska Institute, Stockholm



Understanding mortality patterns is an essential pre-requisite for guiding public health action and for supporting development of evidence-based policy. However, such information is not sufficiently available in Vietnam. Mortality statistics and causes of death are solely collected from health facilities while most deaths occur at home without the presence of health professionals. Facility-based data cannot represent what happened in the wider community. This thesis studies the patterns and burdens of mortality as well as their relationships with socio-economic status in rural Vietnam.

The overall aim is to contribute to the improvement of the current system of mortality data collection in the country for the purposes of public health planning and priority setting.

The study was carried out within the framework of an ongoing Demographic Surveillance System (DSS) in Bavi district, Hatay province, northern rural Vietnam. This study used a verbal autopsy (VA) approach to identify cause of death in a cohort of approximately 250,000 person-years over a five-year period from 1999 to 2003.

During the five year study, a total of 1,240 deaths were recorded and VA was successfully completed for 1,220 cases. Results revealed that VA was an appropriate and useful method for ascertaining cause of death in this rural Vietnamese community where specific data were otherwise scarce. The mortality pattern reflected a transitional pattern of disease in which the leading cause of death was cardiovascular diseases (CVD), followed by neoplasms, infectious and parasitic diseases, and external causes, accounting for 28.9%, 14.5%, 11.2%, and 9.8%, respectively. In terms of premature mortality, there were 85 and 55 Years of Life Lost (YLL) per 1,000 population for males and females respectively. The largest contributions to YLL were CVDs, malignant neoplasms, unintentional injuries, and perinatal and neonatal causes. In general, men had higher mortality rates than women for all mortality categories. In adults of 20 years and above, mortality rates increased substantially with age, and showed similar age effects for all mortality categories with the strongest association for non-communicable diseases (NCD). Education was an important factor for survival in general, and high economic status seemed to benefit men more than women. Compared with cancer and other NCD causes, higher CVD rates were observed among males, the elderly, and those without formal education, using a Cox proportional hazards model.

This study is an initial effort to provide information on mortality patterns in a community using longitudinal follow-up of a dynamic cohort. Continuing the study using the VA approach as part of routine data collection in the setting will help to show trends in mortality patterns for the community over time, which may be useful for priority setting and health planning purposes, not only locally but also at the national level. Further analyses are needed to understand mortality inequality across all ages to have a comprehensive picture of mortality burdens in the setting. Validation studies and further standardization of VA methods should be carried out whenever possible to improve the performance and extension of the technique.

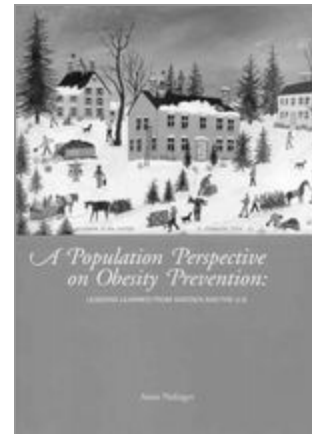
## Anne Nafziger

### A Population Perspective on Obesity Prevention: Lessons learned from Sweden and the U.S.

Supervisors: Peter Byass, Urban Janlert

Thesis defended: 2 November, 2006

Oponent: Professor Russel V. Luepker, Division of Epidemiology, School of Public Health, University of Minnesota, Minneapolis, USA



Obesity prevalences are increasing in Sweden and the US. Obesity has many health consequences and health risks are associated with small increases in weight and marked obesity. Cross-sectional and panel surveys from northern Sweden and upstate NY provide the basis for furthering understanding of body mass index (BMI) development. BMI and weight change ( $\pm 3\%$ ) were used to evaluate obesity and weight loss, maintenance, or gain. The 1989 prevalences of obesity were 9.6% and 21.3% in Sweden and the US; 1999 prevalences were 18.4% and 32.3%. Ten-year incidences (1989-1999) of overweight and obesity were 337/1000 and 120/1000 for Sweden and 336/1000 and 173/1000 for the US. Cross-sectional data suggest obesity is a problem of older age while panel data show that the young are gaining weight most rapidly. Individual changes in BMI have similar trends for Sweden and the US; the majority of adults are gaining weight. Older age, being a woman, higher BMI, and type 2 diabetes were associated with higher odds of weight non-gain. Younger age, being a man, being married and using snuff (snus) increased the odds of weight gain. The obese were 2-7 times more likely to report self-rated poor health. Healthy behaviours explain more of the person-to-person variability in BMI than do unhealthy behaviours or chronic diseases. Encouraging trends were found among Västerbotten Intervention Programme participants: a higher proportion of adults maintained weight in more recent survey years. The proportion of weight-gaining adults with identified health risk factors is smaller than those without risk factors. Frequently weight maintenance is felt to be important only for those identified as having a problem with weight or an obesity-related health condition. The largest proportion of those gaining weight are those with a normal BMI. Obesity prevention should target those usually considered low-risk (young, without cardiovascular risk factors, normal BMI).

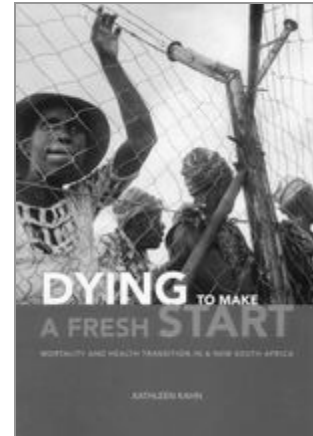
## Kathleen Kahn

### **Dying to make a fresh start: Mortality and health transition in a new South Africa**

Supervisors: Anneli Ivarsson, Michel Garenne, Debbie Bradshaw and Stig Wall

Thesis defended: 11 December, 2006

Opponent: Professor Vinod Diwan, Karolinska Institute, IHCAR, Stockholm



Rationale: Vital registration is lacking in developing settings where health and development problems are most pressing. Policy-makers confront an “information paradox”: the critical need for information on which to base priorities and monitor progress, and the profound shortage of such information.

Aims: To better understand the dynamics of mortality transition in rural South Africa over a decade of profound socio-political change coupled with emerging HIV/AIDS. Thereby to inform health and development programming, policy formulation, and the research agenda; and contribute to debate on the nature of the ‘health transition’.

Methods: The Agincourt health and demographic surveillance system is based on continuous monitoring of the Agincourt sub-district population in rural north-east South Africa. This involves annual recording of all vital events, specifically deaths, births and migrations in 11,700 households comprising some 70,000 persons. A “verbal autopsy” is conducted on every death, and special modules provide additional data.

Key findings: A major health transition has occurred over the past decade, with marked changes in population structure and rapidly escalating mortality particularly among children and younger adults. A quadruple burden of disease is evident with persisting infectious disease and malnutrition in children, emerging non-communicable disease in the middle-aged and older, high levels of violence in an apparently peaceful community, and rapidly escalating HIV/AIDS and tuberculosis. There is evidence of sex differences and socio-economic differentials in mortality; vulnerable sub-groups include the children of Mozambican immigrants and recently returned labour migrants.

Implications: With respect to health transition, empirical data demonstrate a marked “counter transition” with mortality increasing in children and young adults; “epidemiologic polarization” is evident with the most vulnerable experiencing a higher mortality burden; and a “protracted transition” is reflected in the co-existence of persisting infectious disease and malnutrition, emerging HIV/AIDS, and increasing chronic non-communicable disease. With respect to health policy and practice there is urgent need to: strengthen HIV/AIDS prevention, treatment and care; offer effective long-term care to control the rising burden of chronic illness and related risk; maintain and improve maternal and child health services; and address differential access to care. This poses a substantial challenge to a severely stretched health system.

## Scholarships for MPH studies 2006/2007

### The Swedish Institute



**Magda Metreveli**, Institute of V G Eliava microbiology and virology, Academy of Science of Georgia G. Eliava Institute of Bacteriophages, Microbiology and Virology, Diagnostic Medical Center “Diagnosi -90”, Tbilisi, Georgia.

**Roza Khachatryan**, “Erebuni” State Medical College Lecturer and National Institute of Health Assistante of Department of Nursery Management. Armenia.

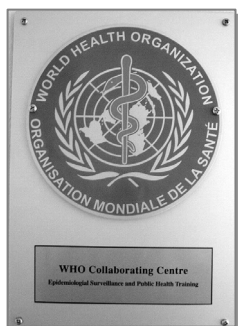
### The East European Committee



**Elena Prokofyeva**, Archangelsk. Northern State Medical University, Archangelsk, Russia.

**Dmitry Shungin**, Archangelsk. Northern State Medical University, Archangelsk, 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 non-communicable 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).

## Shifting to a wider perspective in public health...



My relationship with this department started in 2003 when I took the Master of Public Health (MPH) programme. Many things impressed me, such as how the department staff made the students feel comfortable in many ways such as working with a very qualified MPH supervisor as well as having inspiring lessons with competent teachers. I also enjoyed subjects that gave me a comprehensive public health view, such as 'the evaluation of public health course' and a session on 'the impact of globalisation on public health' during the public health course. Overall, it made me feel that the department was shifting from traditional public health topics towards a broader perspective on public health. This, together with lecturers with various backgrounds and experiences has created a unique public health department. Time goes by but memories of the impressive experiences at the department remained in my mind and made me want to stay in Umeå for further training. In 2006, together with Anna Karin Hurtig, Lars Lindholm and Adi Utarini (Gadjah Mada University, Indonesia), I made plans to get involved in the PhD programme at UISPH although I had not yet secured any funding.

The critical time came when I had to make one of the big decisions in my life by choosing to pursue the still unfunded PhD training at UISPH rather than taking an Australian Development Scholarship for a PhD programme, which secured me a grant for 3 years. Many colleagues commented that it was an illogical decision but my heart said otherwise. I felt that the partnership I had built with the department and with my supervisors was really valuable. In addition, it is challenging to be part of the shift towards a broader vision of public health work within this department by carrying out health systems research as the framework for my PhD studies. Thanks to the County Council of Västerbotten, which later granted me 'Västerbotten County Scholarship', I feel confident with my decision.

One of my reflections from my field experience in North Sulawesi (in 2000-2003) is the need to bridge academic work with "real" public health work in the field. I believe that health systems research is one way of doing this. I hope that my PhD work, as well as the work of the UISPH in general, will contribute to unique and colourful public health work through various projects, education programmes, and collaborations with other institutions, working hand in hand to improve public health all over the world.

*Ari Prabandari – PhD student*

## Flexible studies allow opportunities for skiing



I have been in Umeå for around two and half years now, and I prefer this northern part of Sweden. Umeå is a great town for anyone who likes outdoor activities, both in summer and winter, and the beautiful nature is very close by. I have studied at Umeå University ever since I moved here, studying Food Science and Environmental Science, but I never really got excited about my studies. Finally here in the Master of Public Health programme I feel really interested. The focus on developing countries is really good for me since I would like to work in such settings in the future. However, I find it strange that there are so few Swedish students studying at the department. The start of the programme was very intensive with many new things to learn. The Public Health course is very comprehensive and covers an impressive number of areas. At the same time there were many interesting people to get to know from so many different parts of the world. I have made many good friends here who share experiences from their own countries,

not only in the lectures but outside of class too. The lecturers are very skilled and encourage the students to take an active part in the lectures, which is very important since the students here have a lot to contribute. It is easy to see that the staff at the department is experienced at working with people from different cultures. They are very helpful and willing to make things even better for the students. I have good support from my supervisor Miguel, who is guiding me for my Minor Field Study (MFS) project in Ecuador this summer. I am really looking forward to going there, to do something in practice and get experience.

The MPH courses are well designed and there are many interesting courses to choose from. It suits me that the course is concentrated to only four weeks, the courses do not collide and you can take many courses at the same time. Then there is also time in between the course weeks that allow me to be more flexible with my studies. I can go skiing in the morning when the sun is rising instead of sitting inside in a lecture room until it sets.

*Klas Johansson – MPH student*

## Education in Paradise



Studying for a Master of Public Health (MPH) degree at the Umeå International School of Public Health (UISPH) in Umeå, Sweden was an unbelievably pleasant experience in my life.

To explain why, let me begin with a brief description of the people and the place. I agree with those who have described Swedes as kind, friendly, etc. Indeed, Swedes' unimaginable kindness became evident to me before I applied for the MPH Programme! How? Ms. Karin Johansson and Ms. Birgitta Åström helped me a lot before, during and after my application. When I came to Sweden I learned much more about the extraordinary kindness, honesty, punctuality and hospitality of Swedes.

I find Umeå incredibly beautiful. In the summer it is green everywhere and full of flowers. The autumn is the most beautiful season that I have ever seen. The winter is a true winter but much milder than I expected. Fortunately, the city is very safe and quiet. In Umeå, I made wonderful friends with whom I spent a very good time including a trip across the Polar Circle!

Now let me continue with a few lines about the MPH Programme. Courses were very well organised. As expected, modern teaching strategies and appropriate methods were used. Courses were run in a friendly manner and lecturers were really

competent. The opportunity to ask questions was always there. Suggested references were selected wisely and were useful. Study visits to places such as the Youth Clinic and the County Council were highly informative. Special events, including a Staff vs. Students soccer match, an "open-house" event for learning more about the UISPH, and a Santa Lucia day ceremony on December 13, were all really interesting and unforgettable.

In brief, Swedes are the best hosts that anyone could hope for and Umeå University, although it is still young, is a modern university of high quality. It is worthy to mention that Sweden still provides the opportunity of free education for foreign students, which is another important feature of studies in Sweden. Winter in northern Sweden is long, cold and dark, but I never felt cold because of the warmth of having very good friends and studying interesting courses. Also, I never noticed darkness in presence of the light of the joy and happiness of the good experiences I had here. And about the time, everything was so nice and pleasant that I can only say that time flew by! So there is no surprise that I have described studying in Umeå as studying in paradise. To conclude, I wish to mention my sincere gratitude to all the people who allowed me to have this wonderful experience.

*Alireza Khatami – MPH student*

## A postponed dissertation



I was back in Umeå for my last time as a PhD student in Epidemiology. The date of my defense had arrived. With it came an ice and snow storm, affecting travel into and out of Stockholm and therefore Umeå. Fortunately for me, I come from northern New York, U.S., where we have at least as much cold and snow as Västerbotten County. It never occurred to me that snow could affect my defense! If I had thought, even briefly, that this storm could cause my defense to be rescheduled (or, heaven forbid, cancelled), I would have been in a panic. I wondered if a friend who had promised to attend was going to make it. What I was not thinking was that this weather could affect my examination board. But yes, there was trouble leaving Stockholm. Thankfully, my opponent, Professor Russell Luepker from cold, snowy Minnesota in the northern U.S., had already arrived in Umeå.

While I was anxiously pacing in the room where the defense would take place, three supportive friends waited with me. The defense was scheduled to begin at 9:00. The clock said 8:56 and the four of us, plus two members of the examination board were the only ones present. This appeared to be a relief because I thought it meant a very small group of people would be present to see me falter over answers that I didn't know or ideas that I couldn't explain. Although, I was a little disappointed that none of my advisors had appeared (and the starting time was getting close!). And I had hoped a few other friends and colleagues from the department were going to attend....How were we to know that the grapevine within the department was so quick and strong that every one (except the 4 of us) already knew the defense was postponed for an hour to allow all the members of the examination board to arrive? Of course, this was all promptly addressed at 9:00, and I breathed a sigh of relief with the

hour reprieve before the defense was to start. Or was that just another hour to forget the things I had been frantically cramming into my brain?

When the defense began, I was very pleased to hear a presentation of my work that was both brief and concise. My opponent had carefully read and summarized my work. And I think that task is always given to a distinguished professor with expertise in the area because such a task is at least as challenging as writing the thesis! Well, the defense is a time when you not only prove to yourself how much you know and have learned. It is also an opportunity to consider the ways the work could be further improved so that future work is even stronger. The opponent had numerous critiques and compliments. The examination board contributed to the defense by offering a very broad range of questions that stretched my knowledge and skills by applying

their areas of expertise to my area of study. Finally, the audience, composed of colleagues, department members, fellow students, and friends participated in a way that made me feel that we were all learning about my topic. And because my topic, obesity prevention, is one that concerns both public health professionals, clinicians, and the public, I wanted the work to be something that everyone would understand. I don't know if I achieved that, but I was challenged and affirmed by the defense. The chance to do my PhD studies at Umeå University in the Department of Epidemiology was a tremendous opportunity to acquire new knowledge and skills, build an extended network of colleagues and friends, and learn about my self while building my career.

*Anne Nafziger – PhD student*

## At a crossroads of opportunities



So many nights since I left home, I am more energetic and enthusiastic in building my future career with Umeå International School of Public Health. My first experience out of Africa began in Sweden, I may say it is one of the best experiences that I could have hoped for anywhere in the whole world. For a man like me who has grown up in Ethiopia, it was very easy to adapt to the cultural and economic differences in Sweden. The fact that I had been working with westerners while I was back in my home country may have assisted me in settling in.

Do you know how I decided to come here? I was working with different agencies in Ethiopia, I was entirely focused on public health promotion and I was satisfied. I spent five consecutive years in this relentless endeavour, which was really demanding, tough, and occasionally frustrating. Eventually, I decided to give up project work and go back to school, to have a career break and learn from and share international experiences. Umeå University is well recognised and is a place where one's academic potential rather than bureaucracy determines one's acceptance onto the courses. There is no need to send references or proof of leave of absence from your employer, for example, which most universities demand.

I will not forget the warm smile at Arlanda airport immigration desk and I have found Sweden to be

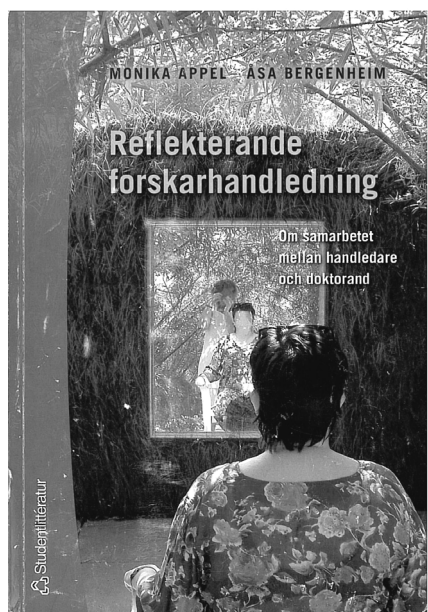
a place where you are given a chance to live in your own ways, which is really nice. Although my first experience of the dorm corridor was a little daunting, it gradually started to feel like home sweet home. For a man like me who loves a day of full strong sun shine and warmth, November was nevertheless bearable, and although I slipped on it a couple of times, I really enjoyed the snow.

The department staff is all superb and they even brought me back a gift from my sweet wife after a departmental trip to Ethiopia! Courses flowed as planned, were well integrated and truly international. We, the students are representative of all major parts of the world and you can hear all accents of English here! There were lots of opportunities for reading throughout the year, which has been very valuable to me.

After an interesting first term, now I see myself as a man at a crossroads of opportunities. My feelings tell me to go back and join the efforts in the steadily improving health status of Ethiopians and all those who need my newly acquired knowledge and skills. I believe it will not be too long until we will tell our children the stories of how we fought against disease and poverty in Ethiopia and Africa.

*Kassa Mohammed – MPH student*

## To write a book



Someone said that there are three things that one “should” do before they die – give birth to a child, plant a tree, and write a book. There are also other people – known and unknown – who have reflected in public (on the internet, for example) on the existential matter about what one “should” accomplish in life. Some of these issues frequently occur in different contexts, such as writing a book. For many of us working within the field of research, the vision of writing a book can come true – in the shape of a dissertation. I am not yet at that stage of my doctoral work, but I have still had the great opportunity to write another kind of book – a book about research supervision. I would like to share some of the experiences that Åsa Bergenheim, with whom I wrote the book, and I had ever since we started with an embryo of ideas until the finished and published book. Some aspects of our collaboration are also applicable in a research supervision relationship.

After a conference, where we both held a lecture about research supervision, we started to talk about writing a book on this theme. Back in Umeå after the conference, we had lunch together and discussed collaboration. We also discussed ideas, after which some clear points emerged.

We wanted to write a book that:

- Was principally aimed at supervisors, but that may also be of use to doctoral students;

- Would reflect the perspectives of both doctoral students and supervisors;
- Was a reflective book, rather than an instructive “how to” book.

We also agreed upon certain starting points for our collaboration:

- We were equal authors and both our opinions were equally valued;
- We had different scientific backgrounds and therefore recognised that we complemented each other (Åsa is a senior research supervisor, working within the field of History of Ideas and I am a social scientist and a doctoral student working within the field of Public Health). Both of us have a great deal of experience from different kinds of work concerning research supervision at various types of faculties;
- We would write everything together,
- We would continue working on the book until we both were satisfied with the result;
- If we had different opinions, we would explain these and discuss the different views.

How did we then work in practice? Well, after having decided on what we wanted to write about and the starting points for our collaboration, we met and had an unconditional brainstorming session. During that meeting, we wrote down the different ideas that came up on a big sheet. When no more ideas occurred, we started to sort through the ideas again and again and again... (Do you qualitative researchers notice the parallel to grounded theory?) Finally we had a preliminary list of contents in front of us. This list of contents gave us a structure that was very helpful when we sat down and actually started to write the book.

As mentioned, we wrote everything together. This doesn't mean that we formulated every sentence together. We shared different parts between us, but during the whole working process, we had continuous discussions about text as well as texture and contents. In this sense it is natural to say that we really wrote everything together, or as a reader put it: “I know that you are two individuals who wrote the book, and that you split the different parts between each other, but the text is written so fluently, that it is as if it is written by just one author.”

To be able to write the book, we needed some peace and quiet. Therefore we left Umeå and Sweden for a couple of weeks and, weighed down with computers, books, pens, pads etc., went to the

Greek island of Zakynthos. Åsa diplomatically talked us through customs, so we didn't have to pay for all our overweight baggage. After two wonderful and intense working weeks in Zakynthos, we went back to Sweden with, in addition to our entire overweight luggage, a draft of the book. Some work still remained, however. Having such a close collaboration, it is easy to be blind to defects in one's work, therefore we invited approximately 30 wise and reflective doctoral students and research supervisors to give us their thoughts and opinions on the book. Almost everyone who was invited attended a feedback seminar that we arranged (this really

says something about the potential for review and constructive criticism in academia!). After a very good seminar, we revised some things in the manuscript before we sent it to the publishing house. When the book was finally published, we naturally wanted to celebrate, and therefore we invited our reflective readers of the manuscript to a big release party. This was a really great end to a really great collaboration!

*Monika Appel – PhD student*

# 1. Epidemiology and Public Health Sciences – 20<sup>th</sup> Anniversary Celebrations

## Epiph 1986-2006, a look back into the future

This Annual Report, being a special celebration issue, tries to describe our research and teaching activities while also looking back over the past 20 years. Research and training, linked as they are, have taken place against the background of our international collaborations but also from our public health work in Sweden related to policy making, health economics and community interventions. This section is an attempt to identify some important events along the way and possibly to give one answer why we are where we are and not somewhere else.

### How did it all start?

There is certainly no single answer to this, but what is true is that we were a handful of people who knew each other and had worked together long before 1986. Conception may be related to joint experiences from having worked in Africa and Asia as doctors, teachers or volunteers. It is probably more than a coincidence that our 20th anniversary also marks 20 years of institutional collaboration with the Community Health department in Ethiopia and that the Butajira Rural Health programme and its field laboratory has also lasted 20 years. The gestational period up to the formal delivery of an independent university department in 1986 also involved working at home in different contexts. Epidemiology, being our core discipline, lacked much of an academic homestead in Sweden before the 1980s when chairs were successively appointed. There was early awareness of the potential of the Swedish population registers for good epidemiology and, to help make these registers available for researchers, we were asked to run a special unit for medical informatics (MEDIFO) to validate and computerise many basic medical sources. This work gave us an indispensable epidemiological network that we are still capitalising on.

Another longstanding collaboration dating back to the period before formal conception relates to the county councils, not only in Västerbotten but also

in the other northern counties. Under the umbrella of the Northern Health Care Region, we led courses in Regional Epidemiology, possibly also a lever to the first Northern Public Health Report that was published in 1992.

### Searching for identity



The above illustrates one of the leading principles that those around at that time were quite firm on – to let the global issues meet the local ones. “Change begins at home” was a slogan used to remind us of the importance of acting locally while thinking globally. Early on we found our departmental logo and we think it still holds. It is open to each and everyone to enter their interpretation into what this soapstone symbolises - it was bought in a handcraft shop in Nairobi in the early ‘80s.

Although “Epidemiology” has always been the prefix of our environment’s name, different appendices have been attached to it – originally ...Health Care Research, later ...Public Health and finally ...Public Health Sciences. In retrospect one might interpret this as a reflection of and a response to the development in the research society at large but more so, perhaps, it tried to give justice to what we were doing – assessing health problems and their causes locally and globally, first and foremost by epidemiological methods but increasingly supplemented with qualitative methods and ultimately trying to suggest interventions and methods for their evaluation. “Epidemiology and Public Health Sciences” became a proper label for our work across disciplines and cultures, retaining “epi” as the basis.

Although during all these years we have strived to be, and perhaps have also been looked upon as being an emerging international academic environment, we have deliberately worked with both Swedish and international health issues. This also applies to individual staff members who have

often been involved in both a Swedish and an international project. Although creating some feeling of diffusion, the importance of having a shared platform in terms of values, premises and experiences cannot be overestimated. We have tried to apply this same principle to administrative staff with the same rationale. Why the initial 50/50 balance between funding for Swedish/International activities has shifted towards 70/30 over the past few years may be a basis for reflection over the period beyond these first 20 years. However, we see that Swedish research councils are increasingly willing to support international collaborations and thus see global health as part of their agenda.

### We set out to grow organically

When developing an organisation, be it an academic or any other type of environment, those around often find themselves experiencing the dilemma of finding the right balance between the euphoria of being set to create something new together, the need to grow rapidly enough to be counted on and the possibility of growing faster than there is substance. Admitting that when saying that we wanted to collaborate internationally while still keeping a firm foot in Swedish research we could not claim any critical mass out of a handful of people, we repeatedly said that we should grow organically. We probably meant not too fast, not too slow, but “lagom” and in response to internal power. Doing so within a medical faculty meant having to face up to many preconceived ideas, sometimes openly hostile ones, e.g. against bringing social science theories and methods into a biomedical world. It took many years before we were looked upon as an equal partner and not only as a cuckoo in the nest, the final recognition being that we were eventually incorporated into the biggest department within the medical faculty – “Public Health and Clinical Medicine”.

### The Annual Report



Many people have asked us over the years how we have managed to produce an annual report every single year, and the answer is that we could not do without it. Although it has been good to have “to show”, it has primarily served an internal purpose – as a way of looking back at ourselves and documenting

for ourselves what the past year has meant and what the major events were – not necessarily the hard end-points but also what kind of joy there was in between. This anniversary one gives even more space to the joy side for obvious reasons. The report of course also fills the function of conveying to others, as modestly as possible, that we have achieved something in terms of publications, fund raising, graduations and promotions. The fact that we have managed to make the report sustainable may indicate more, suggesting that this is the way we work and should work – collectively rather than individually – possibly one factor behind the fact that so many of those around 10 or even 20 years ago are still around.

### Some important milestones

Over the years significant individual achievements may be documented. Actually, each and everyone could. However, some collective achievements stand out as particularly important for the progress and way ahead. First and foremost, the fact that we as of 1986, were given formal recognition as an independent environment. That was where a mandate was given to us. A major battle, however, started and continued for a long time in order to get reasonable space for our activities – which took most of the first ten years. We tried to keep spirits high through revolutionary battle songs. When inaugurating “up-stairs” in 2002, a major milestone was reached.

As a first collective response we managed to receive long term programme support from the Social Research Council (FAS) – that gave monetary glue to our environment to be used for capacity building, infrastructure and to support project ideas not yet ready to stand on their own feet. Actually, programme support has generously been granted to us over the 20 years from FAS, SAREC, and FHI, the National Public Health Institute. On three occasions we have also managed to successfully compete over so called “spear-head” money granted by the county council. The importance of having had that core support cannot be overestimated for an activity initially almost totally without university support.

A significant contribution to our environment took place when, as of 2003, we established a long term collaboration with the county council and the National Public Health Institute, which gave

us a more stable platform for research, including senior lecturer posts in health care research, health economics and child health, as well as 4 doctoral posts.



Recognition can also be important even when no money comes with it. The appointment by the university of our international training programmes into the Umeå International School of Public Health (UISPH) in 2001 and our accreditation by the World Health Organization in 2003 as a Collaborating Centre for Epidemiological Surveillance and Public Health Training were important milestones for external visibility.



More recent milestones, such as being part of the only so called Linné grant to Umeå University and the 10 million SEK donated to us by the Centre Party for global health scholarships, are unique in kind but also appreciated for their ten-year duration.

### The summer course

During 2007 we will offer the 20th summer course in “Epidemiology and Field Research Methods”. This “institution” started well ahead of the first Umeå based course in 1988 through a series of courses that we gave in Ethiopia, Somalia, Pakistan, Angola, Vietnam, Nicaragua and Tanzania in conjunction with the start of bilateral collaborations with the medical faculties in these

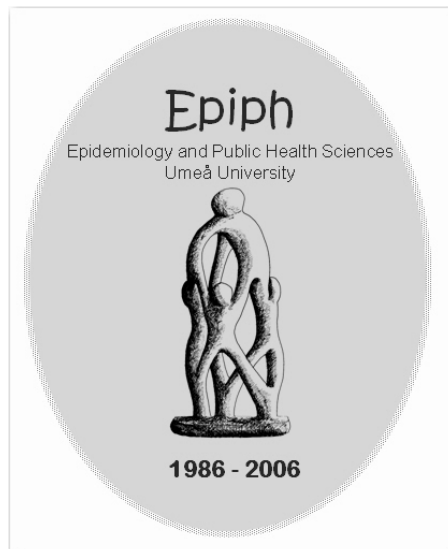
countries. The basic rationale behind the courses was to help start a process where local research priorities could meet global research methods, and to convey a message that “only the best methods are good enough” in contexts where health problems are great. When moving the course to Umeå in 1988 we started as a residential course in Strömbäck, outside Umeå, and the empirical data were generated by the international students through interviews with the local villagers. This created many cultural clashes and literally exhausted the village after some years, so the course eventually moved onto the Umeå campus. The selling concept has since then been the interplay between quantitative and qualitative methods, now a characteristic of our research at large.

### PhD theses – mirroring the history of Epiph

Much of the above may be mirrored through the 49 PhD theses defended during the 20 years, pictorially illustrated on the cover of this annual report. They are as much the ultimate outcomes of individual efforts and sacrifices as they are the results of broader collaborations individually and institutionally. Their occurrence over time also illustrates well the time it takes to harvest – it took 6 years to complete 2 of the theses while 27 of the 49 were completed during the past 6 years. The present pool of 33 PhD students promises to carry the baton further, even sky-high. It goes without saying that the international mix of students at MPH as well as PhD levels, when bridging academic and cultural competence, is what forms our milieu and guarantees its future.

*Stig Wall*

## Highlights of the 20- years celebration



With 20 years of research, education and collaboration with persons, universities and countries, it is a demanding task to plan for proper celebration activities. However, with our united efforts lots of activities came about. Academic lectures, poster production, public lectures and a departmental visit to Butajiira were the main activities carried out during the year.

### Academic lectures



Three special lectures were organised as part of the 20<sup>th</sup> anniversary celebrations. The first guest-speaker (February) was Mike Rowson, one of the editors of the Global Health Watch and lecturer in International Healthcare at University College, London. The Global Health

Watch 2005-2006 is a report which aims to present a hard-hitting assessment of inequalities in health and health care and to challenge the major institutions, such as the World Health Organization or the World Bank, that influence health. It is also hoped that the Watch will be used as a catalyst for the development and strengthening of existing campaigns around the world to improve health and equity. The report is a collaboration of public health experts, non-governmental organisations, community groups, health workers and academics, and it is planned

to be published every two years. Mike Rowson was in Umeå as part of an international campaign to launch the report.



Our second speaker (March) was Adam Taube, Professor Emeritus in Uppsala. Adam Taube started working for the Nutrition Institute in Addis Ababa for a short period in 1971. Between 1972 - 75 he

was employed by UNESCO as a professor/advisor at the university ("HSIU"). He has since worked for shorter periods in some other African countries - in Tanzania teaching "Regional Statistical Officers" and in Lesotho as an external examiner and also as a consultant at the central statistical office. In his lecture "Working with statistics in Africa", he summarised his personal experiences concerning both statistics production and statistics teaching in Africa.

Finally our last speaker was Denny Vågerö (May), professor of medical sociology and, presently, director of Centre of Health Equity



Studies. He is a commissioner in the WHO Commission on Social Determinants of Health, which will work during 2005-2008. His lecture "Do health inequalities persist in the new global order?" presented the situation of health inequalities from an international perspective and discussed some of the reasons for current trends. The WHO Commission was set up as part of a global response to health inequalities.



## Public lectures

To spread knowledge in society is sometimes labelled as the third priority task of the university. To work in the field of Public Health, collaboration was established between the two leading non-formal adult education associations (SV-Studieförbundet Vuxenskolan and ABF-Arbetarnas Bildningsförbund), the unit of Epidemiology and Public Health and the unit for research and development in the county council.

The outcome of the collaboration was a whole week “in the sign of Public Health”, meaning that public lectures in all municipalities were planned and carried out. The aim was to show the citizens of Västerbotten what we are doing and who we are.

We can now summarise the week “in the sign of Public Health”, which was held in the end of September. In cooperation with staff from the county council, we managed to deliver lectures in 14 of the 15 municipalities in Västerbotten county. In total more than 1000 people listened to and took part in the discussions of 31 lectures from EPI and the FoUU unit at the county council.

The collaboration with SV and ABF will continue, and so the anniversary activity can also be regarded as a starting point for future collaborations.

Examples from the week:

Malin Eriksson and Maria Emmelin delivered a lecture in Vindeln with the title “Is socialising with my neighbours a way of getting better health?”

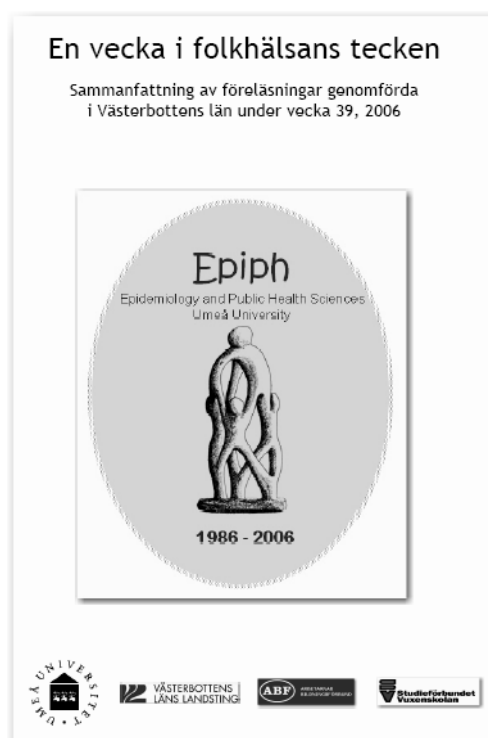
“Is my work a blessing or a burden for my health?” was the title of the lecture held by Prof Urban Janlert in Burträsk.



Maria Wiklund and Ann Öhman discussed and lectured with students in Norsjö on the theme “Beautiful, thin and suffering from stress – youth health in our mind”.

“How can health care give better health” was a lecture delivered by two persons in different places. Helene Johansson in Sorsele, and Kerstin Tellbro in Dorotea.

Eric Bergström delivered a lecture in Lycksele entitled “The increase of child obesity can be overcome – less food and more physical activity is the simple and trying prescription.”





The poster exhibition at the department was inaugurated by professor emeritus Lars-Gunnar Larsson



Outdoor quiz at the Nydala Lake



Also celebrating with a dinner and dance to the Renhornen Orchestra

## It all started 20 years ago....



During the department's 20<sup>th</sup> anniversary celebrations the planning of a collective department trip started to grow. Who, where and why...

The **who** was a given: The staff of the Department of Epidemiology and Public Health Sciences.

The **where** was a given: To Ethiopia where the department's international collaborations started and to celebrate together with the Department of Community Health in Addis Ababa the 20 years of collaboration with our department.

The **why** was a given: To celebrate the department's 20 successful years and to make a successful collaboration between the departments even better (if possible!).

So after a lot of planning on both the Swedish and the Ethiopian side, the itinerary for the trip to Ethiopia was presented.

### Wednesday 15<sup>th</sup> November

Departure from Umeå in the afternoon with 26 department members and, after some problems in Stockholm, we were finally onboard the airplane that was going to take us to Ethiopia. This flight was a memorable moment for some of us, not least because this plane was one of Ethiopian Airlines' older models.

### Thursday 16<sup>th</sup> November

After a long night flight we arrived in Addis Ababa Airport where we were welcomed by some of the Department of Community Health staff members. After a stop at our hotel we were transported to the Department of Community Health where we met all of the department's staff. Yemane Berhane, head of Department of Community Health, held an introduction speech talking about the Butajira Rural Health Project and the long collaboration between our two departments.

After coffee some of our staff members presented their areas of research to our colleagues from Ethiopia. Our first day in Ethiopia was wrapped up with a wonderful dinner at a beautiful local restaurant where we enjoyed traditional Ethiopian food and a fantastic show with traditional Ethiopian dancers.



At Umeå airport



The Butajira market place

### Friday 17<sup>th</sup> November

After a good night's sleep and a nice breakfast we were off to Butajira by bus. During the journey we just relaxed and enjoyed the fantastic scenery of the beautiful Ethiopian landscape. We arrived just in time for the Butajira Friday market. All of us really enjoyed the market where you could find almost anything. After installing ourselves at our hotel and eating a nice lunch it was time to visit the Butajira Rural Health Project's field office. The rest of the afternoon was spent planning for the coming days' fieldwork and visits to some of the villages in the project.

### Saturday 18<sup>th</sup> November



Visiting one of the villages outside Butajira

Saturday the day of visiting the villages and the day of group work was one of the most exiting days for most of us. We were divided into five groups with a group leader from the Department of Community Health and a local field worker from Butajira. After transportation out to the

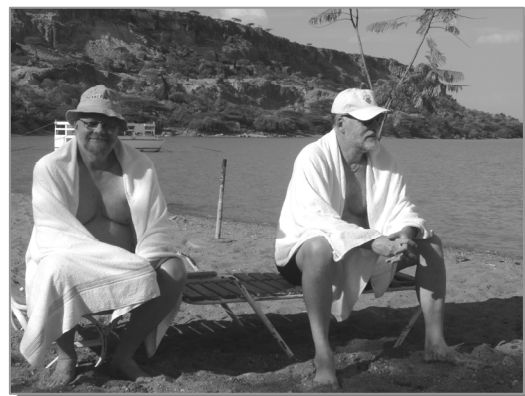
villages the group work started. We were guided around the villages by a local field worker. After a fantastic day in the field we were all invited to a big party at the field office. We were served fantastic food and a lot of dancing under the open night sky of Butajira. This was really a wonderful day and a day which we will remember for a very long time.

### Sunday 19<sup>th</sup> November

Sunday was the day for group work presentations. Until lunch the five groups finalised their work. In the afternoon it was time to present the group work and communicate our impressions from the field visit. Following these presentation and communication sessions we were offered the opportunity to visit a Crater Lake outside Butajira. Once again we were presented with fantastic scenery and a view of the wonderful Ethiopian landscape.

### Monday 20<sup>th</sup> November

After breakfast we boarded the bus once again, this time for a trip to Lake Langano and the Bekele Mola hotel. On our way we stopped at one of the Department of Community Health's field stations near Zway where medical students receive some of their field training. We had two more nice stops in Zway – one down by Lake Zway and one quick stop for refreshments' in the town of Zway. The bus driver then "honked" the horn and a couple of minutes later we were on our way to Lake Langano. The Bekele Mola hotel, beautifully situated on the Lake Langano waterfront, welcomed us all. After a very nice lunch, those of us that wanted took a nice bath in the lake. A relaxing afternoon was concluded with an outdoor dinner overlooking the lake.



Lake Langano



Ethiopian and Swedish collaborators outside the Butajira field office

## Tuesday 21<sup>st</sup> November

After a good breakfast at Lake Langano we were off to Awassa to visit Awassa College. After an interesting presentation of the Hospital we were divided into two groups and then guided around the hospital. A splendid lunch was served close to Lake Awassa. Then we all boarded the bus for our final destination of the day – Wondo Genet, a fantastic place surrounded by green hills and, once again, wonderful scenery. After checking in to the hotel most of us headed for a nice bath in a swimming pool heated by hot springs. We had a wonderful dinner at Wondo Genet and the evening ended with a nice outdoor fire with a lot of nice impressions and experiences to discuss.



Taking a shower in hot spring water at Wondo Genet

## Wednesday 22<sup>nd</sup> November

This was a very long day with a long journey back to Addis Ababa, the capital city of Ethiopia. We stopped in Zway for refreshments and also

stopped for lunch at a fantastic restaurant. Eventually we were back where we had started at the first hotel in Addis Ababa. The dinner of the day was served at an Italian restaurant where we all had a lot of different dishes and a wonderful afternoon. Some of us even bought some Ethiopian art from the art gallery, which was integrated in the restaurant.

## Thursday 23<sup>rd</sup> November

This was our last day in Ethiopia. A lot of things were still to be done. We were invited to visit the Black Lion Hospital and the Department of Community Health. Yemane Berhane then invited us to his newly opened Institute, Addis Continental. After an interesting presentation of the new institute we were offered lunch at the institute. There were a number of alternative options of how to spend the afternoon: a visit to the Fistula Hospital; an invitation for refreshments at Yemane Berhane's home; and a visit to some Ethiopian shopping areas. Finally, after bidding farewell to our Ethiopian colleagues, we headed for the airport for a long night flight back to Sweden with lots of very nice memories from a wonderful visit to Ethiopia and the Butajira Rural Health Project.

Many thanks to our Ethiopian friends for a fantastic, well planned programme and for the warm welcome that they gave our group. Many thanks also to all of those at our department who made this fantastic journey possible.

There were a lot of photos taken during this trip to Ethiopia. These photos, together with a day-by-day diary, are documented on a "20-years with the Department of Epidemiology and Public Health Sciences Celebration journey" DVD.



Map showing the department's round trip travel in Ethiopia

## Thoughts in retrospect and into the future



① Miguel San Sebastian



② Leoni Dapi Nzefa



③ Curt Löfgren

### Can you give an example of a new research area that might be important in the next 10 years?

① Two broad themes might be relevant: one relating to globalisation and how policies emerging from this process affect populations' health; the second relating to the exploration of how social determinants can be modified in order to have an impact on health.

② Adolescents' Health "a neglected dimension" in Sweden and in transitional Cameroon, Africa.

③ I have mentioned health management as a potential new course. Courses and research build on one another, so it follows that this field of research should be included in the discussion about what's important for the future. There are several related concepts here: health economics; health management; health systems; and health services research. This is not something new to our unit, but an interesting discussion would be which specific research questions in these fields would be important to explore.

④ I believe that the consequences of climate changes will have an impact on the global public health research area.

⑤ The challenge for the future will be to take advantage of the unique diversity within our unit by facilitating exchange of experiences and integration to strengthen ongoing research areas, and also to help new research areas to develop. From the many potentially strong future research areas I want to highlight "child public health" and "genetic epidemiology". However, our competitiveness within Umeå University, nationally and internationally, is not dependent on us tackling new research areas, but on improving and expanding those already being studied.

⑥ Register epidemiology was new in the '70s and will soon have a revival! Evaluation using non-RCT (randomised control trial) study design will also have a future!

### Do you think that we should offer new courses or take away, some of the present ones, in the next 10 years?

① The amount and type of courses will depend mainly on the policy direction of the unit (without forgetting the human resources capacity). Given that the unit forms part of the three "strong research environments" of welfare, gender and population studies, this should also be reflected in our teaching. In line with this we should build on our strengths and develop advanced courses related to health economics, medical sociology and epidemiology.

② We should offer more courses such as an SPSS course, advanced Epidemiology, Public Health Nutrition in developing countries, and how to write a scientific article. We can take away Medical Sociology.

③ My answer is a yes, at least to the first question. This is for several reasons. One of them is that our students think so. In the programme evaluation we made in January 2007, half of the students answering the questionnaire said they would like to see more courses than the ones we offer. Many of them wished for a course in health management. My impression is that they think knowledge in this field is important for their future careers in public health. Being able to offer such courses is therefore also important for UISPH.

④ We should offer new courses in the next 10 years, to provide even more knowledge in the field of Public Health.

⑤ Our teaching programme has been continuously developed over the years, a process that has recently been intensified, and needs to be continued. We need to increase the visibility of our teaching programme, and while continuing to attract students from abroad, we should also increasingly recruit students from Sweden. While continuing with an emphasis on Master level courses, we also need to develop courses specifically for the PhD-level. We should take advantage of our multidisciplinary staff to develop courses integrating different disciplines of importance for public health, which has been suggested under headings such as "Evidence based public health interventions" and "Equity within public health". Such an integration of disciplines in course planning and teaching would also favour increased integration of our research activities, which in itself is crucial for our future competitiveness.

⑥ Of course we should offer new courses (e.g. advanced biostatistics, register epidemiology), but also take away some courses that overlap with others already in the program (e.g. public health informatics).



④ Karin Johansson



⑤ Anneli Ivarsson



⑥ Lennarth Nyström

**What changes would you like to see at the EPI-unit concerning working conditions, facilities, organisation etc?**

① Some of the most important changes have been already initiated. A new organisational structure of the masters' programme might create a more dynamic and challenging teaching environment.

② Increased gender equality in work/lectures, for instance women should be involved in statistics and epidemiology and more women should be Professors. Epi-unit should involve female international researchers/lecturers as staff members. Time for physical activities for all 1-2 times a week is needed.

③ I think the changes we have already done and are planning to do are important, e.g. a programme committee for the MPH. It will be very important to adapt our organisation to a, perhaps substantially, larger student group in the future. This creates new challenges for service to our students and for our education.

④ I would like to see a new building for the Umeå International School of Public Health. This would enable future growth in terms of both education and research.

⑤ We have the potential to continue expanding within both teaching and research, and while doing so maintaining, or even improving, the quality of our efforts. Crucial for future expansion is secured and long-term funding, which is a challenge. Secured funding will enable an increase in permanent staffing and an expansion of office space, necessary for high-quality work both by staff and students. In this process our organisational structure needs to be developed to support effective communication internally as well as externally.

⑥ I want democracy, thus we need a new top organisation (Ledningsgrupp) with representatives from all categories (PhDs, doctoral students and TA-personal). Ämnesföreträdarkgruppen and Lärarmötet works well, but PUMP has to be changed. Almost all information given at PUMP can be read elsewhere. Instead PUMP should be a forum for discussions of the all questions of importance for the department.

**Tell us about a moment or a situation, connected to EPI, which meant a lot for you.**

① The relationship with the masters students is always a great opportunity for learning and exchanging ideas. The generous support that the PhD students receive in the unit throughout their research projects is constantly moving.

② When I got my first office at the unit (table, chair, computer, etc.) when I was accepted as a PhD student, it was like a reward and gave me a status. It was great.

③ The first time I taught on a course in our MPH programme was such a moment. I was used to teaching students – most of them Swedes – in economics, business and public management. Now I found, in front of the MPH students, that my frame of reference drastically changed. From having talked about typically Swedish and rich-country problems I was now discussing malaria, TB, poverty, restricted access to health care, and so on. It was a dramatic change of perspective from the less to the more important, from a smaller to a truly global context. And I liked that – I liked it a lot!

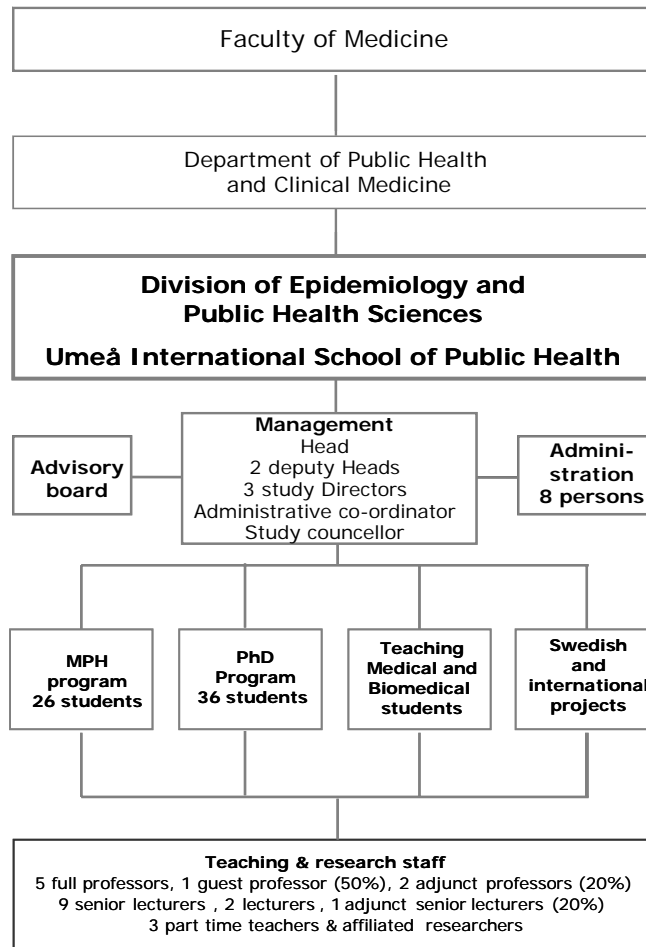
④ The travel to Ethiopia in November gave many unforgettable memories that I will always carry with me. The welcome and support during the whole journey, from the staff at the University of Addis Ababa and fieldworkers in Butajira, was incredible. To actually be in Ethiopia and see the living conditions of the place. To see the joy and laughter among the children – despite the poverty. To visit the research project in Butajira in a remote mountain area and be passed by grandmothers (very fast), when climbing the mountain. To be able to see everything for myself – everything that I had heard so much about but had never seen.

⑤ I have so many memorable moments that I can hardly choose which one to share with you. I will always remember a late autumn day in 1992 when an extensive planning period for the celiac disease research project was finalised and the study was launched. What a relief! It was as if a heavy rucksack was lifted from my shoulders and it felt as if I was floating in the air with my feet at least a decimetre above the floor.

⑥ When the whole department gathered at Levar hotel in the end of the 80's and wrote an application to get a basic grant for the department.

## 2. Institutional setting

### Organisation



**Figure 1.** Organisational chart of division within department and faculty

Our division is one of six subunits within the Department of Public Health and Clinical Medicine. 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

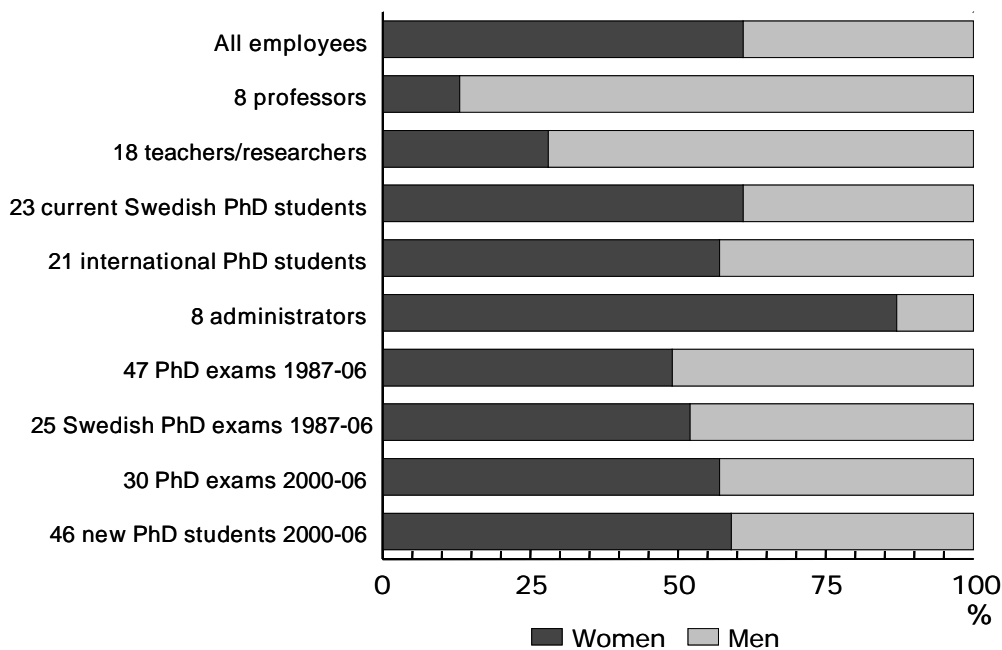
At present 46 research and administrative posts are attached to our division, however, not including all international and doctoral students employed

or associated with other departments. Of these, 29 are women (63%). Of the 8 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 24 Swedish PhD students currently registered, 12 are women and among 20 international PhD students, 12 are women. Six out of 7 administrators are women.

Of the 47 students who have completed their PhD during 1987-2006, 25 were women. Twenty-five of these were Swedes, 13 of which

were women. Of the 30 students who have finished their PhD since 2000, 17 were women.

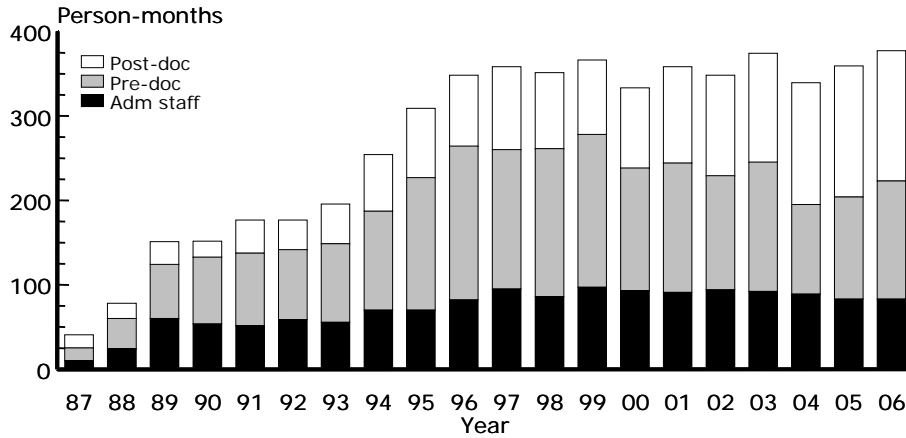
During 2000-2006, 46 students were admitted for PhD studies, of which 26 were women. The sex distribution among all the staff members is illustrated in Figure 2 below, showing a female/male ratio of 61:39 with women in majority. However, it is a sex imbalance in certain groups, with a minority of women among professors and teachers/researchers whereas it is quite the contrary among administrators where most employees are women.



**Figure 2.** The sex distribution among all 47 staff members employed at or associated with our academic environment by subcategory in 2006.

In all, 44 doctoral students are registered (2006) within 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 22 post-doc personnel represent many disciplines such as environmental, paediat-

ric, 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; 22%, 37% and 41% accounted for by administrative, pre-doc and post-doc staff respectively (Figure 3).

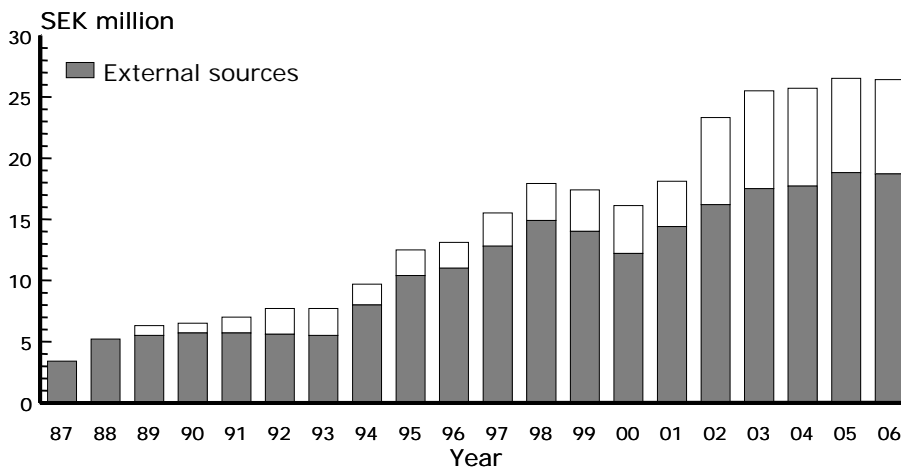


**Figure 3.** Development of person-months at work by staff category 1987-2006.

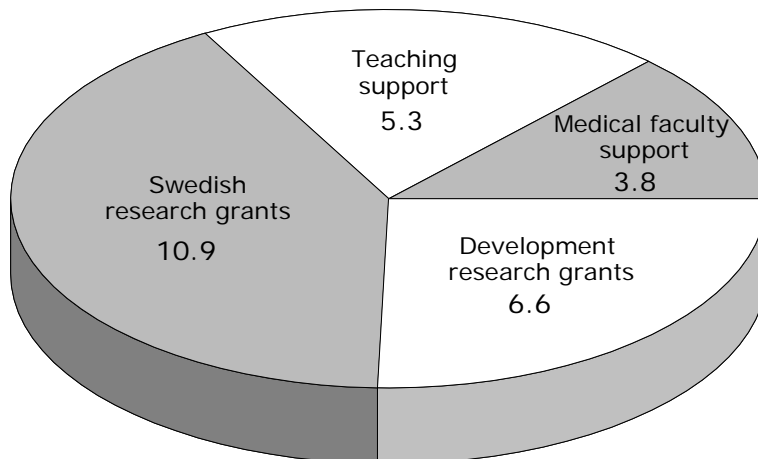
## Budget

The total budget (Figure 4) for the year 2006 amounted to SEK 26.4 million, 65 % of which

consisted of external Swedish research grants or grants for bilateral development research projects (Figure 5).



**Figure 4.** Development of total budget 1987-2006.



**Figure 5.** Financial sources for the fiscal year 2006 (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. The balance between Swedish and development research, see Table 1, 75:25 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 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 11% by the operating budget. It should be noted that the overhead support to the university administration was SEK 1.58 million during 2006.

## 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.

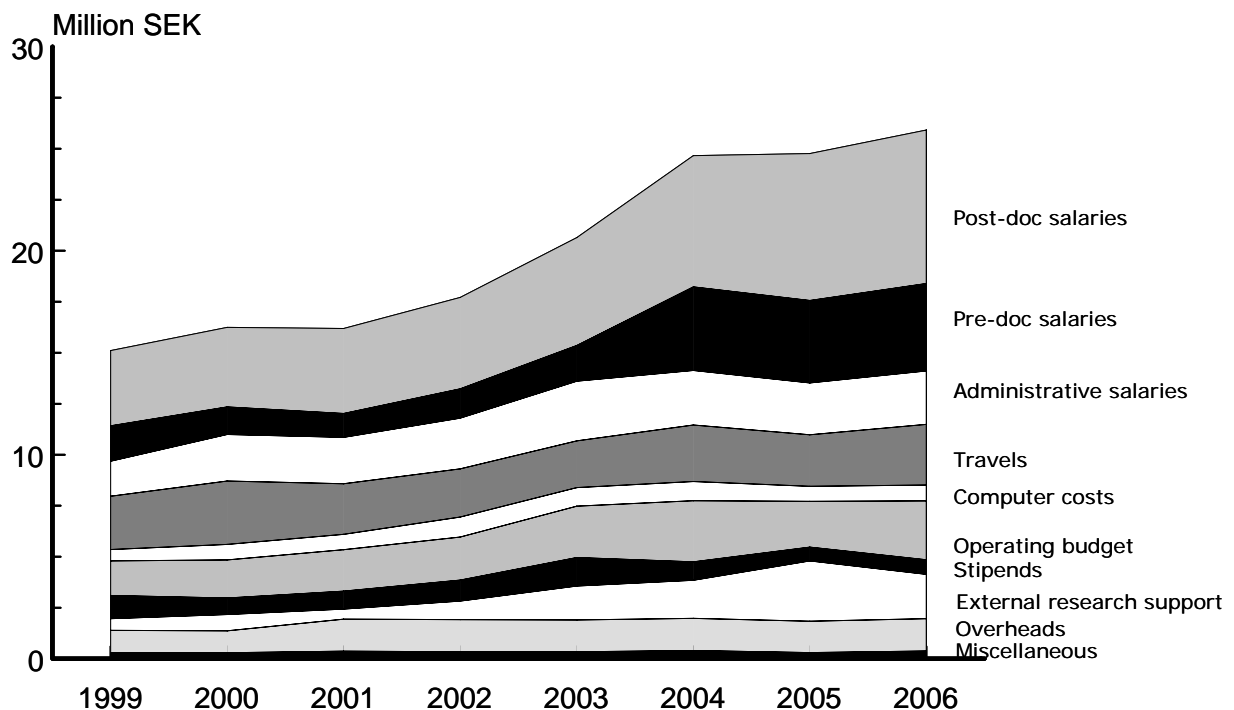
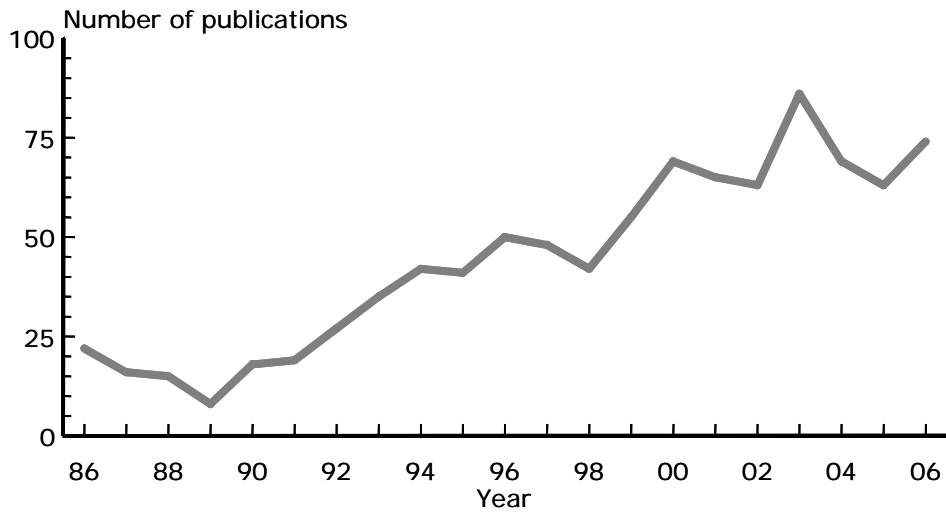
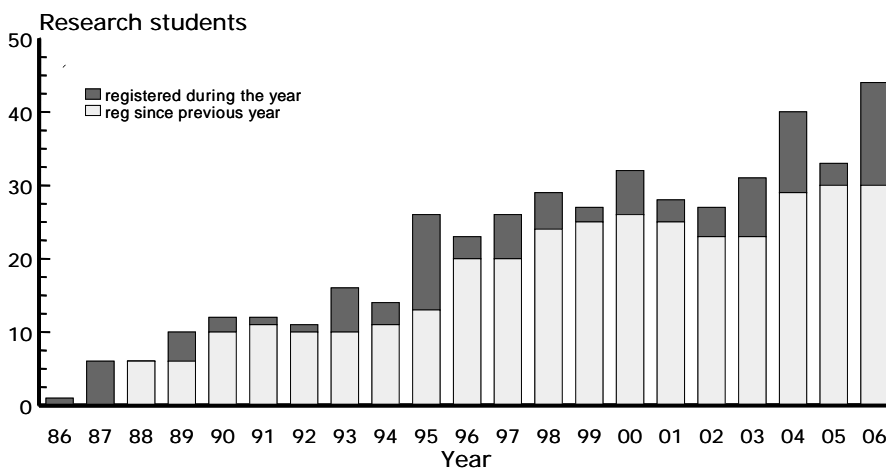


Figure 6. Budget development 1999-2006.



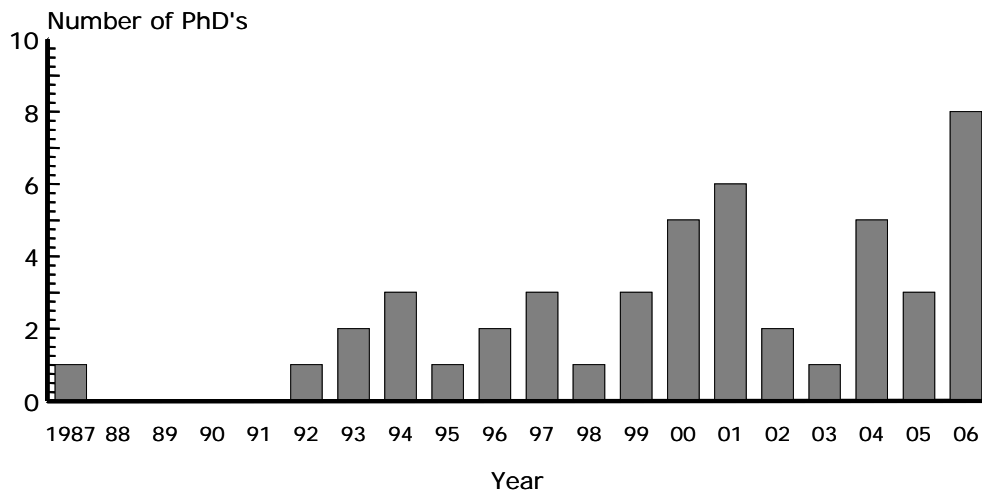
**Figure 7.** International publications in peer reviewed journals from our unit 1986-2006.



**Figure 8.** Research students at the division 1986-2006.

Figure 8 shows the number of research students over time, one of the parameters for the budget model assessment system. During 2006, 44 pre-doc personnel were associated with our department, 14 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 1987-2006.

**Table 1.** Project grants for 2006.

<b>Funding source</b>	<b>Title of project/programme</b>	<b>SEK</b>
FAS	The epidemiological transition in perspective – risk factor patterning in three rapidly changing societies by reference to its key phases and the historical evidence from affluent countries.	1 000,000
	Celiac disease. Has the time come for primary prevention and mass screening?	800,000
	Scandinavian journal of Public Health (support for Editorial Board)	280,000
	Can public health improve by strengthening social capital?	500,000
FORMAS	Celiac disease. Has time come for primary prevention	653,800
VR	Does screening generate ill-health and increased	375,000
	South Africa, Integrating health information into policy	50,000
	Can group intervention increase well-being and reduce stress among teenage girls with longterm psychosomatic pain problems?	350,000
	Celiac disease. Has time come for primary prevention	375,000
Sida/SAREC	Butajira health in transition study, Ethiopia	729,000
	Coordination and administration of research projects in cooperation with UNAN-Leon	350,000
	Reproductive and child health – Nicaragua	558,000
	TANSWED HIV programme in Tanzania	517,000
	Health Systems research, Vietnam	700,000
	Reproductive health in Tanzania	494,000
	Child Caretaking of siblings in Nicaragua: a public health approach	500,000
	Network for methodology development in international public health	1 490,000
EU	CDEUSSA	247,000
	REACT	119,750
WHO	Community based deployment of Coartem with malaria rapid tests, in Tigray, Ethiopia	70,000
AFA	Preventing weight gain – a suggested shift in public health strategy	1 067,800
Umeå kommun	Social capital as a tool in public health work	515,000
County Council	Senior teacher in health economics	183,600
	Increasing the health-oriented perspective in health service, - barriers and possibilities from the perspectives of health professionals	80,000
	Partner related violence in connection to pregnancy and child birth	120,000
	Senior teacher in epidemiology	727,500
	Senior teacher in Health and Health care	384,000
	Health-oriented perspective in health service from the perspectives of health professionals	160,000
	Support for three PhD students	1 143,900
	Database for health examinations in Västerbotten	294,375
	Salut project	127,300
	Physical activity and social variables in an ageing population	25,000
	Increasing the health-oriented perspective in health service, - barriers and possibilities from the perspectives of health professionals	200,000
FHI	Co-operation between National public health institute and Epidemiology	1 003,000
Taylor&Francis	Scandinavian Journal of Public Health	98,800
Miscellaneous		1 335,819
<b>Total</b>		<b>17 624,644</b>

**Table 2.** Post graduate and research training support and stipends for 2005/2006.

<b>Funding source</b>	<b>Title of programme</b>	<b>SEK</b>
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	2 357,000
	Basic support	200,000
	International summer course in Epidemiology and field research methods	136,000
	Alkohol, droger och samhälle	117,000
	Research methodology, 5 points and Advanced biostatistics, 5 points	175,000
	Biomedicinsk grundutbildning, 5 poäng (in Swedish)	170,000
	Medical school	1 110,000
Sida/SAREC	International summer course in Epidemiology and field research methods	400,000
Sida	Minor Field Studies (MFS)	174,000
East-European Committee	Public Health Policy and Practice – pedagogical training and capacity building	315,000
County council	Scholarships for PhD studies	150,000
<b>Total</b>		<b>5 304,000</b>

## Special events during 2006



PhD scholarships were awarded to Fatwa Sari Tetra Dewi, Firdy Permana and Ari Probandari



Celebrating that the Nordic School of Public Health awarded the 2006 Public Health Prize to Stig Wall



Hans Stenlund was appointed to associated professor



Maud Olofsson, the chair of the Centre Party of Sweden, declared that the Centre Party will donate 10 million SEK to Umeå International School of Public Health for support to doctoral and master students from developing countries.



Traditional Lucia celebration on December 13 for staff and students



Open house for staff and 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.** MD, 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 violence from a gender perspective in national and international studies; Sweden, Ecuador, 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.



**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 Impact Project at the University of Aberdeen, U.K.

**Kjerstin Dahlblom.** MPH. Doctoral studies on children's perspectives of sibling 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 and sociological aspects on emotions. Also attached to the Department of Sociology.



**Kerstin Edin.** RN midwife, PhD. Main research interest on the topic of intimate partner violence with special focus on gender and on the period of pregnancy.

**Berit Edvardsson.** MD, General Practitioner. Doctoral studies on patients with symptoms related to indoor environmental factors. Also attached to Department 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, epidemiology and public health with special reference to 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.



**Malin Eriksson.** Social worker, Master of Social Science. Doctoral studies on "Social capital for health interventions – prerequisites, barriers and prospects".

**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.** Physiotherapist. 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.



**Barbro Larsson.** Administrative assistant, working with department and project administration.

**Lars Lindholm.** 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.



**Kristina Lindvall.** Dietitian, master in Food and Nutrition, project assistant. Involved in a research project studying attitudes, norms, behaviours, strategies and eating habits important for weight maintenance.

**Curt Löfgren.** Senior lecturer in Economics. Study director of the Master of Public Health Programme. 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.** Medical student, doctoral studies on the Swedish epidemic of celiac disease in children, with focus on aetiology and clinical expression.



**Maria Nilsson.** BA Social work. Doctoral studies on "Health interventions targeting young people - to prevent the use of tobacco". Also attached to the unit of Research, education and development at Västerbotten County Council.



**Margareta Norberg.** MD, PhD. General Practitioner. 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.



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



**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 Swedish Council on Technology Assessment in Health Care (former director of the Centre for Epidemiology (EpC) at the National Board of Health and Welfare).



**Ann Sörlin.** Physiotherapist, master in sports medicine. Doctoral studies on "gender equality and health". Study counsellor at the International School of Public Health.

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



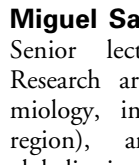
**Susanne Walther.** Working with budget and departmental administration. Also involved in the project on celiac disease, and research co-operation projects with Ethiopia.



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



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



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



**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.



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



**Birgitta Åström.** Co-ordinator of student support. Administrator in research and education including scholarships (MFS, Västerbotten 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.

**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.



### 3. On-going Swedish and international studies

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. Studies could therefore be grouped under the three main problem areas – aetiological, social and evaluative research –, even though many projects cover more than one area.

#### Aetiological studies

often start from a specific disease or a suspected exposure. They focus on the relation of disease occurrence to social conditions and exposures and 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. Such health information systems are badly needed in developing countries. They may serve as guidelines for primary health care activities and could also enable the assessment of disease trends and predict disease outbreaks.

A proper understanding of the aetiology 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.

#### Social epidemiology

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 being addressed. The recognition of the key role of community participation for public health promotion is 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.

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 that have a special bearing on social epidemiology may be identified. Some may also respond to the international health policy research agenda being developed to meet emerging health problems and the ongoing epidemiological transition.

#### Evaluative research

An area where Swedish and development research share experiences is *evaluative research*. Evaluations are a basis for health planning and management. Epidemiological methods are essential in evaluations of preventive measures, such as community interventions and individual preventions within the health sector, as well as when assessing medical technologies and practices. Evaluations of health care measures aim to learn more about the efficacy, cost and ethics of the specific measures, adjusting health programmes accordingly and improving the implementation of public health interventions. 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.

## Crossing boundaries

Most of the projects at our unit are a part of international or national collaborations and are crossing, not only the boundaries of the three research areas of aetiological, social and evaluative research (as previously described), but also other boundaries. The research projects are often multidisciplinary and originated within different occupational areas, research paradigms, cultures and contexts. Accordingly, it is not easy to put one label on each of the numerous ongoing research projects at our unit, since most of them could have many.

Some good examples of projects with different partners and covering many topics of research are the unit's longest lasting bi-lateral research collaboration with Butajira in Ethiopia (since 1986) and also 'the Västerbottens Intervention Programme', which originated from our county council of Västerbotten.

Health economics is another example of crossing boundaries since it is often included as a miscellaneous research area. Health economic research follows two main lines – the normative base for economic evaluation and the integration of epidemiological and economic data as a basis for decision-making.

Yet another example is the combination of different quantitative and qualitative methods, often referred to as 'methodology triangulation' and often used in the unit's different ongoing research projects in Sweden and abroad. Longitudinal population-based and in-depth studies can in this way complement each other and hence enrich the final study outcome.

Several people from our unit are members of national and international research networks and, in the end of this chapter, two new networks are presented; "Ageing and living conditions" and "Umeå Advanced Gender Studies".

## 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 Indonesia, Ethiopia, Vietnam, 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.

## DSS in Ethiopia

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.

2006 was the 20<sup>th</sup> anniversary not only for the division but also for the Butajira project. The initial census that gave the baseline for demographic surveillance was performed in late 1986. In early 2006, a dataset including the first eighteen years of surveillance, 1987-2004, was compiled and cleaned for analysis. As part of the anniversary celebrations, a poster was prepared. This shows results and output from the Butajira activities, both in terms of population experiences of vital events and academic achievements by the researchers involved within the Ethiopian and Swedish partner institutions. The poster is shown on the next page.

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.

**Contact: Anders Emmelin**

# Butajira Rural Health Programme

## demographic surveillance for health and research development

Department of Community Health, Medical Faculty, Addis Ababa University, Addis Ababa, Ethiopia, Mesganaw Fantahun, co-ordinator  
 Division of Epidemiology and Public Health Sciences, Umeå University, SE-901 85 Umeå, Sweden, Anders Emmelin, co-ordinator

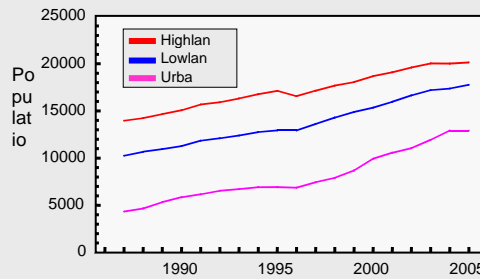
The Butajira Rural Health programme goes back to the early 1980s and started operating in the field in late 1986. It is one of the oldest still operational Demographic Surveillance Sites. The programme is one of the founding members of the INDEPTH network. The site is located in a district in central Ethiopia with a population of approximately 400,000, 40,000 of which are included in the surveillance sample. The population in the DSS is followed over time, with regular visits to each household.



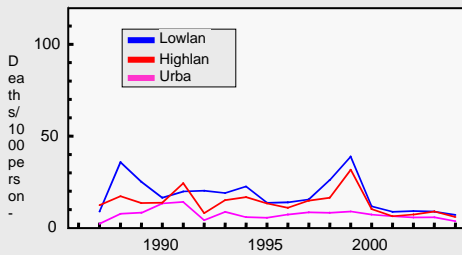
The initiators, the late Desta Shamebo (above), Stig Wall (below), with Yemiru Teka, the first field co-ordinator (right)



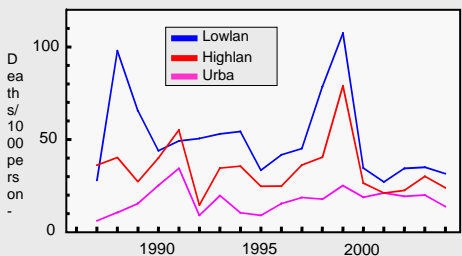
Population growth, 1987-2004



All ages mortality, 1987-2004



Infant



The routine demographic surveillance generates a number of important studies with implications both for further research and for local and national health policy and planning. Among such studies in Butajira have been:

- migration and population development
- adult mortality
- child mortality

In the twenty years of follow-up conditions have changed greatly in Butajira town, but far less in the rural areas. The population development (above) illustrates the changes in Ethiopian society, with a marked migration into the urban area. Mortality (left), whether among infants or in all ages, does not indicate any corresponding trend of improvement in health.

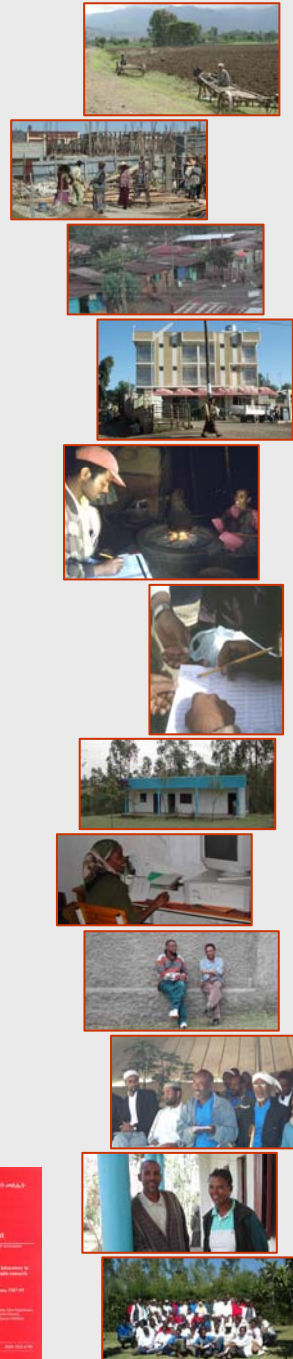
A central function of the Butajira DSS is to host specialised research projects. Such projects have included studies on:

- child morbidity
- management of childhood illnesses
- reproductive health
- risk factors for Helicobacter pylori infection
- mental health
- indoor air pollution and respiratory infections
- domestic violence
- urban – rural spread of HIV infection
- meningitis vaccine trial
- development and testing of verbal autopsy methods

One of the major strengths of the programme over twenty years, has been the quality and the constancy of the field staff. Through periods of changing academic leadership, episodes of delayed salary payment and changing data entry routines, data collection and management have been going on. Village based enumerators have visited household monthly to inquire about changes, reporting back to the office in Butajira town.

The Butajira DSS has been the site of research for a number of theses, both on doctoral level and masters' theses in Public Health

BRHP 1986 – 2006, another 20<sup>th</sup> anniversary!



## DSS in Indonesia.

Our collaboration with the Community Health and Nutrition Research Laboratory (CHNRL), Gadjah Mada University Yogyakarta and the Purworejo Demographic Surveillance Site (DSS) has played an important role in providing accurate demographic and epidemiological data for evidence-based policy making at the district level. Results from the demographic surveillance and from different studies conducted in collaboration with us have been utilised 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 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 deaths 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.

**Contact: Hans Stenlund**

## DSS in Vietnam

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. Its purpose is to give a perspective on a local population's demographic and health status as well as monitoring ongoing changes. FilaBavi is a joint effort with the Vietnamese Ministry of Health, Hanoi Medical University and the Health Strategy & Policy Institute, in collaboration with us and IHCAR at the Karolinska Institute.

Within the framework 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 to investigate the underlying factors and mechanisms resulting in the current situation. Qualitative data have 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.

**Contact: Lars Lindholm**

## DSS in South Africa

A 3-year grant plus a 1-year extension from SIDA/Sarec, under a special programme 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 in field research, epidemiology and public health informatics at the University of the North (subsequently re-named University of Limpopo, an historically disadvantaged institution in South Africa), as well as hosting students in Umeå. The University of Limpopo also hosts the Dikgale demographic surveillance site, where we are collaborating with data analysis. The third arm of this partnership is with the University of the Witwatersrand in Johannesburg, the host institution of the Agincourt demographic surveillance site in Bushbuckridge. We are engaged with PhD training for Agincourt staff, as well as collaborative work on methods underlying demographic surveillance which recently has been expanded also into a collaborative child health research initiative. This collaboration is also part of our international work on the health of ageing

and the emergence of non-communicable disease epidemics, in close collaboration with the Indepth Network.

**Contact: Peter Byass**

## Tanzania and HIV

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 '90s, 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 [Lugalla et al 2004]. 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 ongoing 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.



KARP field work team in Karagwe

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 utilised 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 revisit areas not studied since 1987. The focus is to assess if and why they have been protected from further spread. The cross-sectional studies performed in 2005/2006 in the urban area revealed socio-economic and gender inequalities in the HIV prevalence. A planned PhD project will focus on equity aspects of HIV/AIDS, comparing the cross-sectional and follow-up data from the different districts in Kagera. By also testing and evaluating participatory intervention strategies specifically targeting the youth, the project also hopes to contribute in developing culturally acceptable intervention tools.

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 fieldwork. A KARP website has been developed where the project is presented and the main activities and results summarised ([www.mucho.ac.tz/kageraproject/index.html](http://www.mucho.ac.tz/kageraproject/index.html))

**Contact: Maria Emmelin**

## Priority setting of district health services in sub-Saharan Africa

Undertaking health sector reforms, including decentralisation, to improve performance has so far been less than satisfactory. Health systems are

strangled in a vicious cycle: on the one hand management capacity is perceived as inadequate to take full responsibility for priority setting, on the other hand, without effective decentralisation of the priority setting process, the capacity will never increase. District level services from the most peripheral facilities to district hospitals account for a majority of service contacts, and are in general the only services accessible to the poor. Therefore, a district focus is necessary to improve quality, and capacity and outcomes of countries' overall services.

Attempts have been made to strengthen district level planning and management, mainly based on measuring burden of disease, cost effectiveness and capacity considerations and related planning tools. However, sustainability has not been achieved and the value of this approach has not been proven.

National policies, health strategies and plans normally include a strengthening of district health boards with intended community representation and more or less active stakeholder forums. These have so far not performed as expected but they do exemplify that more inclusive priority setting and planning processes are intended. In this situation it is argued that in order to improve quality, equity, accessibility and affordability of care at district level, there is a need for new approaches to priority setting that fairly reflect, not only the mainly provider-defined burden of disease, but also incorporate capacities and interests of all stakeholders and the demands of the population being served.

A democratisation of decision making and priority setting processes is one way to counterbalance streamlined global policy making and improve local governance. In a five-year EU-supported project, which started in 2006, ways of improving the processes of priority setting in district health management will be studied through action research in Tanzania, Kenya and Zambia. This project will further study the capacity of local priority setting at district level in developing countries where considerable resources come from international actors with their own priorities and agendas. We will involve ourselves in this project in partnership with public health and social science oriented academic institutions in each of the African countries and three public health institutions in the EU.

**Contact: Anna-Karin Hurtig**

## Controlling Tuberculosis and HIV

Four research students are working on their projects focusing on how international programmes of HIV and tuberculosis (TB) control are being implemented locally. The four projects, described below, try to capture the local challenges faced when implementing programmes we often get to know by their international abbreviations.

### Mother-To-Child Transmission of HIV in Malawi

In the absence of intervention, 15-35% of infants delivered to HIV-infected mothers will become infected themselves. The discovery that as many as half of these infections are preventable with intrapartum and neonatal single dose nevirapine (NVP) has transformed the ability to confront this transmission route. The PMTCT programmes aim to expand voluntary counselling and testing, improve acceptance of HIV-infected persons, and develop extensive community education in order to provide benefits beyond the infants lives saved with NVP therapy. The PMTCT is also an entry point for antiretroviral treatment (ART) for symptomatic infected mothers. While simple and cost-effective measures are now available to PMTCT, there are still many challenges to the programmes due to underlying barriers. These need to be considered and understood before scaling-up of programmes.

Malawi is one of the African nations hardest hit by the AIDS pandemic. Nearly 16% of adults ages 15 to 49 – some 800,000 people – are believed to be infected with HIV, and a child born today has a life expectancy of just 37 years. HIV prevalence rates in pregnant women countrywide range from 16% to 36%. In 2003, 520 000 women of childbearing age were estimated to be infected with HIV and about 35% of these mothers are likely to transmit HIV to their newborns.

Coupled with a government initiative for the provision of ARVs to the people who need them, the ART provision services have been extended to Thyolo district. It is in this district where Malamulo hospital is operating and, since August 2004, the centre has begun ART service provision together with PMTCT services. This doctoral project aims to study the demand and compliance of PMTCT services among women in rural Malawi and to explore barriers and promoting factors to delivery of the PMTCT programme as perceived by rural women, men and service

providers. Special attention is given to the implications of home deliveries to the programme.

**Contact: Fyson Kasenga**

### Improvements in Tuberculosis control in Indonesia

Indonesia has shown promising progress in Case Detection Rate and Treatment Success Rate in the Tuberculosis Control Programme. However, DOTS (the internationally recommended strategy) is not provided to TB patients in all health facilities, including hospitals, although almost all geographical areas are covered by DOTS through health centres. In fact, many TB cases in hospitals are not managed properly and are not reported to the National Tuberculosis Programme. The National Tuberculosis Programme has initiated the expansion of DOTS to hospitals in Indonesia between 2006 and 2010. However, lessons from the Hospital DOTS Linkage Project in Jogjakarta, Indonesia, have shown that whilst the involvement of hospital in DOTS has contributed to the increase of Case Detection Rate, hospitals are weak in respect to case holding and treatment supervision. It is therefore important to identify the potential facilitating factors and barriers to scaling up DOTS in hospitals in order to contribute to the planning and implementation process in the Ministry of Health. This may also provide useful lessons in the scaling up of public health programmes in clinical settings in general. The overall aim of this doctoral research is thereby to contribute to the tuberculosis control programme in particular as well as to the health system in Indonesia in general.

**Contact: Ari Probandari**

### The co-epidemic of tuberculosis and HIV/AIDS in Cameroon

WHO recommends collaborative TB/HIV activities and the policy goal is to decrease the burden of TB and HIV in populations affected by both diseases. The objectives of collaborative activities are: (1) to establish the mechanisms for collaboration between TB and HIV/AIDS programmes; (2) to decrease the burden of TB in people living with HIV and AIDS; and (3) to decrease the burden of HIV in TB patients.

Likewise, providing highly active anti-retroviral therapy (HAART) to HIV infected TB patients is now a WHO 'standard of care' policy and

managers of several DOTS programmes have adopted this.

Through strengthening the links between HIV and TB programmes and general health services, voluntary counselling and testing (VCT) serves as the entry point for prevention and treatment of HIV/AIDS, and as a key to a more coherent response to TB in high HIV-prevalence settings. However, experience has been shown that TB patients' and the community's responsiveness to seek treatment is as important as providing these services, and these factors determine the overall effectiveness of the services. The dual stigma and social exclusion associated with HIV and TB might act as barriers to TB patients being tested for HIV. Lack of awareness of the link between TB and HIV, traditional beliefs and the taboos associated with the disease all play an important role in the scourge. Other contributing factors may include the cost of seeking care, gender inequality issues, ethnic group and health care system factors, such as staff attitudes towards these patients. It is therefore of paramount importance that the socio-cultural, environmental and political factors, which are common to both TB and HIV/AIDS, are addressed jointly in control strategies.

TB/HIV co-infection poses a major threat in the Northwest Province (NWP) of Cameroon and thus necessitates important measures to curb the spread and reduce new infections, and treat already existing cases. The overall objective of this planned PhD project is to identify the various barriers to VCT for HIV among TB patients in the NWP of Cameroon in order to highlight the benefits of collaborative TB/HIV activities to policy makers and improve uptake of VCT services in the province.

**Contact: Barnabas Njozing**

### HIV/AIDS/TB care and prevention among Swedish immigrants

Currently, Sweden and other Western European union (EU) countries are experiencing increases in immigrant-associated TB and HIV cases, which is an important public health challenge. Africans are the most severely affected migrant community for both HIV/AIDS and TB. These communities have different cultural backgrounds and speak different languages, which can restrict them from accessing and using health care services and therefore prevent them from receiving the care they need. Moreover, structural barriers may result in some populations, including undocumented

migrants, being neglected in terms of detection of health problems and in health service provision. These are substantial obstacles to HIV/AIDS and TB care and prevention among immigrants and the Swedish population in general. Identifying and understanding the role of these barriers may help to develop integrated intervention programmes.

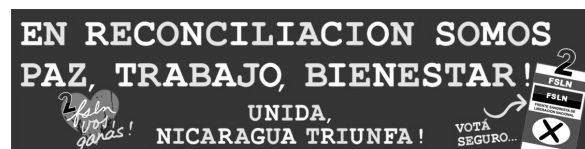
This project is therefore an attempt to determine the effects of socio-cultural, structural and linguistic barriers, as well as prejudice, on the prevention and care of HIV/AIDS and TB among immigrants in general, and sub-Saharan African immigrants in particular, by asking the following questions: What are immigrants' knowledge, beliefs and attitudes concerning HIV/TB transmission, prevention, care and treatment? What are the barriers to health care service utilisation and to diagnosis, prevention and treatment of HIV/TB among sub-Saharan African immigrants? Do the barriers include accessibility, acceptability, availability and affordability? What are care providers' experiences of caring for immigrant patients? What lessons can be learned?

The overall aim of this project is to investigate, identify and delineate potential difficulties to HIV/AIDS/TB care and prevention with a view to recommending ways in which these may be overcome.

**Contact: Faustine Nkulu Kalengayi**

## Fighting poverty in Nicaragua

Nicaraguan society has been characterised by rapid social changes during the last twenty-five years. November 2006 marked a new phase in the country's history when Daniel Ortega was elected president. Ortega was the leader of the Sandinista party in the '80s when the dictator, Somoza, was overthrown in a revolution. For the next decade, Ortega was president in the military regime that followed the takeover. Back in office some 16 years later he is now expected to fulfil the promises from the election campaign summarised as "putting Nicaragua and its poor first".



The overall challenge for the new government is the poverty affecting more than two thirds of the population. The educational and health systems need to be reinforced so that these services may be available to all members of society.

However, church power is still strong in Nicaragua, as seen by the approval by all parties in the National Assembly in October 2006 (in the middle of presidential election campaign) to outlaw therapeutic abortion, penalising it with five to eight years in prison. Anti-abortionists appeared well-organised and vociferous, whilst protests from women's organisations and doctors were left unheard. Support for the new law cut across party lines. The consequences for maternal health could be appalling, and maternal deaths have already been reported in the mass media.

## UNAN-León – arriving at sustainable research training

Since the 1990s, Sida/SAREC has supported research collaboration with the Nicaraguan university, UNAN-León, and the Swedish universities Karolinska Institutet, Umeå University and Uppsala University within the research areas of infectious diseases, occupational health, demographic health research, reproductive health and mental health. The long-term objective is to strengthen research capability by supporting post-graduate training at the medical faculty in León. The ongoing cooperation between each institute has achieved its first step by now offering masters programmes in epidemiology, occupational health and infectious diseases, and through the creation of three research centres. The collaboration has also witnessed the graduation of 11 PhD students, sandwich trained in collaboration with Swedish universities, and the publication of 108 scientific articles. This successful collaboration has now entered a new phase where the main objective is to create a local environment for sustainable research and PhD training in medical sciences.

## CIDS and Umeå

For Umeå University (Departments of Epidemiology and Public Health Sciences and Psychiatry) the Nicaraguan counterpart in the collaboration is the Centre for Demographic and Health Research (CIDS), founded in 2002, with the objective 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. Since the beginning of 2005, regular cycles of updated base line data for the HDSS (Health and Demographic Surveillance System) have been taking place. This is the core of CIDS and serves as a platform for population-based studies, a

sampling frame for interventional studies in occupation health, and community diagnostics of infectious diseases. Thus, it is anticipated that new links will be created with other research programmes and suitable conditions for the development of research intervention strategies for any public health problem will be established.

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 the effects of violence on reproduction and child health. The knowledge gained on prevalence and mechanisms for 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.

The joint program of CIDS Demographic and Health Research is with IMCH, Uppsala University and Umeå University. The units of Mental Health and Gender and Reproductive Health are now developing further collaborations with Umeå.



Young boy selling pigeons in the street in León, Nicaragua

### Sibling caretakers

An ethnographic study of the life situations of sibling caretakers in deprived areas of León, Nicaragua is ongoing. 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 perform all daily, routine chores in their homes. The majority of the children do not attend school. We found that the care-giving role implies a narrowing of life options in a long-term perspective. These children achieve essential life

skills early in life, but as they grow older they tend to fall behind due to their marginalised situation and lack of basic education.

The Western concept of childhood is however challenged by these young people's experiences – work is a natural part of their everyday lives and they react to this with pride. They perceive their work as important for their families and they appreciate the fact that they have close contact with their siblings. Combining work and school is a challenge for most of them. They have very little free time, and have limited opportunities to nurture relationships with others. The awareness that they miss out on education is the most problematic issue for them as caretakers.

### "Home alone"

Together with the NGO, CrozzCom in Barcelona, the Home Alone study was initiated in 2004 and developed from the study of caretakers. By making it possible for home-working children to vocalise and describe their situations, –the project aims to 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 of Child Photographer, child interviews and testimony video. Workshops with a group of 32 children have been organised, and individual video interviews are ongoing. A photo exhibition and a video from the project are to be launched in 2007.

### School attendance in León

Since school attendance was found to be one of the problems for sibling caretakers, a study on school dropouts was conducted and is now being analysed. The poor educational level in Nicaragua is shown in the recent estimates of school

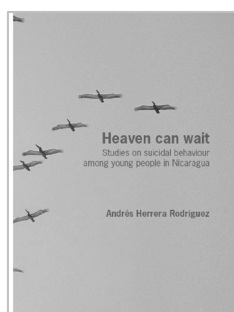


dropouts, reporting that fewer than 60 percent of children who start school reach even the fifth

grade in primary school. In our study we asked 370 children, in the age-group 6 to 16 years of age in León to complete a matrix on their school attendance. Detailed information on repetition and drop-out were collected to detect risk patterns of quitting school.

One of our findings was that the children blame themselves for not succeeding in school, and they perceive it as an individual problem. For a deeper understanding of why they see it this way, individual interviews with around 15 children and six focus groups with children age 12-18 years were conducted. Analyses of these are on-going.

### Studies on suicidal behaviour among young people



In December 2006, Andrés Herrera Rodríguez defended his thesis entitled "Heaven can wait", about suicidal behaviour among young people in Nicaragua, at the division of Psychiatry at Umeå University. His studies were conducted within the collaborative

DHS project, and, in October 2006, a "pre-defence" was held in León with Elmer Zelaya as opponent.

The main aims of the thesis were to estimate the extent of the problem and to explore factors related to suicidal behaviour among young people in a developing country, Nicaragua, using a combined quantitative and qualitative approach. Three studies were conducted between 1999 and 2006. In the first study, all hospital admitted suicide attempt cases in the area of León were assessed over a three-year period. Secondly, a qualitative study using individual in-depth interviews was conducted with eight girls aged between 12 and 19 admitted to hospital after attempting suicide. Thirdly, a study using the Attitudes Towards Suicides (ATTS) questionnaire was conducted in a community-based sample of 278 young people aged 15-24 years to assess suicidal behaviours, attitudes towards suicide and exposure to suicidal behaviour among significant others.

Hospital surveillance showed that suicide attempt rates were highest among females in the age group 15-19 years with a female rate three times that of males (302.9 versus 98.9 per 100,000 inhabitants per year). Drug intoxication and pesticides were the most commonly used methods for the suicide

attempts. A consistent seasonal variation, with peaks in May-June and September-October, was found in each of the three years, possibly relating to exam periods in schools.

Findings in the qualitative approach led to a tentative model for pathways to suicidal behaviour based on four main categories: structuring conditions; triggering events; emotions; and action taken. Dysfunctional families, lack of confidential and trustworthy contacts, and interpersonal conflicts followed by emotions of shame and anger were some important components in the model.

The community studies showed that suicidal expressions (life-weariness, death wishes, suicidal ideation, suicide plans and suicide attempts) were common among young people and more than 44.8% of males and 47.4% of females reported some kind of suicidal expression. Gender differences were small. Exposure to suicidal behaviour among others was associated with higher levels of self-reported suicidal behaviour. The attitude study showed that boys had less preventive attitudes than girls, possibly indicating their higher risk for successful suicide. Exposure to suicidal behaviour and one's own suicidal behaviour showed an association with specific patterns of attitudes.

The findings should be taken into consideration when planning for prevention of suicidal behaviour among young people in a developing country like Nicaragua.

The thesis can be downloaded at [www.diva-portal.org/umu](http://www.diva-portal.org/umu).

**Contact: Kjerstin Dahlblom**

### Smoking prevention – a global, national and regional mission

Each year tobacco products kill close to 5 million people around the world, and WHO predicts that the number of tobacco related deaths will rise to 10 million within the next twenty years. The global trend is that smoking is increasing with a transition from north to south. Worldwide, about 50% of men and more than 10% of women 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 was in effect 90 days thereafter.

Sweden signed the convention in June 2005, after adaptations of the Swedish tobacco law. There are, however, still some issues that need to be resolved from the Swedish perspective in order to be able to fulfil the demands of 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 initiatives 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 this issue. Different examples of our work in the field of tobacco prevention are given below.

### Tobacco free duo

In order to prevent adolescent use of tobacco in the county of Västerbotten, the planning and development of a long-term programme was started in 1993 by the County Council. The programme, which targets young people and is called '*Tobacco free duo*', is a multifaceted programme mainly focusing on building policies, increasing knowledge on tobacco related issues and utilising adult support and methods of social influence. We evaluated the programme in 2006 and found a significant decrease in the prevalence of smoking among young people in Västerbotten, compared to the national average. The name '*Tobacco free duo*' originated from the idea that a young person and an adult signed a mutual contract to stay tobacco-free together for the next three years. The adult was thereby making a commitment to both provide a good example and to actively support the younger person in staying tobacco free. The next step in the evaluation is to investigate whether the intervention has had an effect on tobacco use among the adults.

**Contact: Maria Nilsson**

### Tobacco and pregnancy in South Africa

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. In collaboration with the Medical Research Council (MRC) in Cape Town, studies have been carried out in Western Cape to identify the influences on coloured pregnant women causing them to smoke, to describe the role of midwives in smoking prevention and cessation and to describe the perspectives of key informants in the health services regarding the high smoking rates. The results from these studies and intervention experiences from other settings, including Sweden, formed the basis for designing an intervention study. During a series of exchange visits and joint workshops, a plan for the intervention and a scientific evaluation was developed in close collaboration with actors involved in the training of midwives and those responsible for developing antenatal services in South Africa and in the province of Western Cape. A baseline survey was performed during 2006 and the intervention phase started in January 2007. Two South African PhD theses (one registered at our department) will be based on this project. The first will focus on the development of the intervention design and on the evaluation of its impact on smoking rates while the other will describe the intervention process and its influence on midwives and pregnant women.

**Contact: Maria Emmelin**

### Tobacco control in Indonesia

Indonesia is the fourth largest tobacco market in the world. The high level of tobacco consumption is an effect of a weak tobacco control policy. The main reasons for poor tobacco control methods are the contribution that the tobacco industry makes to government revenue and job opportunities. The government is dependent on the tobacco industry as a means for sustaining employment levels, and for taxation revenue. Programmes and policies to reduce the exposure to environmental tobacco smoking (ETS) in public places and workplaces are regulated, but 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 where a totally different smoking culture exists, 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 aged 15-75 years were exposed to ETS.

**Contact: Hans Stenlund**

## Gender based violence

### Intimate partner violence during pregnancy in Sweden

In a 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 has been on gender and on the period of pregnancy and childbirth, and the study has been carried out in different locations in the north and middle of Sweden.

**Midwives** working in antenatal care in Västerbotten were asked about experiences, knowledge, attitudes and routines regarding violence against pregnant women. At the time of the study, IPV was not a part of the antenatal care agenda and, although very knowledgeable about and sensitive towards pregnant women and their needs, midwives 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 initiated in antenatal care in Västerbotten in 2005 and findings from this study were included in the development of this policy.

**Professionals** working with men prone to act violently were interviewed at two prisons and at two centres for men (inclined to violence or with different life crises). The intention was to explore professional discourses regarding IPV. Despite the professionals' good intentions of building an alternative masculinity as a way of counteracting men's violent behaviour, their discourses may in fact have the opposite effect by re-enforcing gender stereotypes and even omitting important relational topics in the programmes [Edin, 2006].

**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 cope in everyday life, and while they offered resistance to the violence they also tried to cover up, frequently even when meeting midwives at antenatal care appointments.

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

**Contact: Kerstin Edin**

### Masculinity and gender in Nicaragua

Within the unit of Gender and Reproductive Health there are ongoing studies: a) Follow-up of the cohort of mothers screened for violence during pregnancy and their children. The objective is to assess the outcome of infants of mothers exposed to violence, and to identify protective factors for stopping violence against mothers with small children. b) Quantitative and qualitative studies on sexually transmitted diseases, prevalence, high risk groups, gender norms and attitudes and sexual violence in collaboration with Yale and Umeå. Three studies and a preparatory stage are being planned: a) Masculinity and violence. This project aims to study various forms of masculinity within Nicaraguan society, to detect possible health promoting masculinities, and to address men's social engagement and networking. In a second step this project may be helpful in designing and implementing preventive programmes to reduce violence against women in Nicaragua. b) Pilot studies of interventions against intimate partner violence through strengthening the health sector response in identifying and supporting women victims; c) This project aims to address birth attendance and mode of delivery in a low income setting through health economic analysis and by investigating health outcomes as well as the attitudes of health providers and parents.

**Contact: Ann Öhman**

### WHO multi-country study: Ethiopia

A study of Women's health and Domestic violence was carried out within the BRHP infrastructure in 2001. This included qualitative components exploring attitudes and perceptions about domestic violence, a cross-sectional survey of the prevalence of domestic violence among women of reproductive age and its association with mental health, and a sub-study of the

association between exposure to domestic violence and 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. The results from the Ethiopian cross-sectional study were included with the results from nine other countries (Bangladesh, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia and Montenegro) in the WHO Multi-Country Report launched in 2005. The multi-country study is unique for its consistent methodology, which makes 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 were observed in urban Japan (15%), while the highest were found in rural Ethiopia (71%) and Peru (69%).

Further analyses of the Ethiopian data constitute the basis for a PhD project in psychiatry by an Ethiopian collaborator who will focus on poverty and mental health, and will investigate the association between domestic violence and mental health, changing attitudes and norms and child survival.

**Contact: Ulf Högberg**

### Prevention of domestic violence in Indonesia

The research theme of intimate partner violence (IPV) will be addressed in a PhD project. The objective is to generate knowledge of women's experiences and perceptions of domestic violence in Indonesia and to identify feasible preventive strategies at the community level, especially focusing on masculinity and men's involvement as health promoters for prevention. The framework is gender research. The methods applied will be quantitative, analysing data from a cohort of women interviewed with the WHO-questionnaire on domestic violence, and qualitative, with focus group interviews and in-depth interviews with women and men. It is anticipated that the results will improve managerial knowledge on norm systems, and identify barriers and supporting factors for ending IPV.

**Contact: Elli Nur Hayati**

### Violence research in Tanzania

The initial results on prevalence, health outcomes and women's responses from the multi-country study on women's health and domestic violence against women were presented recently. 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 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 were initiated within the same subject area. 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 with a view to being able to develop preventive political and community strategies as well as improvements 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 with a view to suggesting relevant intervention strategies within health care organisations as well as at the community level. The third project focuses on the sexual abuse of children, with the overall aim of contributing to a better understanding of the magnitude of the problem, identifying community perceptions and socio-cultural factors that perpetuate its occurrence, and identifying the perceived roles of different community groups in handling the problem.

**Contact: Maria Emmelin**

### Reproductive health

#### Pelvic pain during and after pregnancy

The prevalence of lower 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 lower 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 lower 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 characterised 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 the condition during pregnancy.

The cohort was followed up at six months and 12 months after delivery, with a questionnaire investigating prevalent LBPP in the non-pregnant woman. The aim was to investigate the prevalence of chronic LBPP, risk factors and specified outcome factors. At six months after delivery, as many as 40% of women with LBPP during pregnancy still report persistent symptoms. This group of women had had significantly earlier onset of pain during pregnancy, higher maternal age, higher body mass index, a higher level of pain due to LBPP during pregnancy and after pregnancy, and included a higher proportion of women with joint hyper-mobility. Perceived health status among women with persistent LBPP was less favourable in comparison to women with remission of LBPP, and the use of medical services was prevalent post partum. The risk of persistent LBPP was increased three- to fourfold in women delivered by elective caesarean section (CS) compared to women delivered by emergency CS [Mogren, 2006] This finding is a novelty and warrants further investigation.

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

investigated through in-depth interviews and focus-group discussions.

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.

**Contact: Ingrid Mogren**

## Chronic diseases in children and adults

### Health in childhood and adolescence

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 school children. In an epidemiological study among 6-13 year olds in Umeå, we found that the proportion of children classified as overweight was 23% (double the proportion of 15 years ago). 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 and quality of life on the one hand, and overweight and pain symptoms on the other, will be explored further. Preliminary results show that approximately 50% of children who are overweight do not perceive themselves as overweight, and neither do their parents. Children who were aware of being overweight reported a poorer quality of life. A study among 4-year-old children in the county of Västerbotten shows that overweight and obesity are more prevalent in girls than in boys and the prevalence is as high as in school age children. A low socio-economic level of living area seems to be related to a higher prevalence of obesity. Increased preventive efforts, at both the individual and the societal level, must be undertaken to reduce further health risks in obese children.

**Contact: Erik Bergström**

### 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 unrecognised contributor to ill-health, even though an effective treatment is available – namely avoiding all foods with wheat, rye or barely for

life. This is not an easy dietary regime, and with a study using a focus group design we are now exploring how compliance can be facilitated.

For many years we have been responsible for a national incidence register of celiac disease in Swedish children [[www.umu.se/phmed/epidemi/celiaki/register/](http://www.umu.se/phmed/epidemi/celiaki/register/)], and all 47 paediatric clinics across the country recently contributed to a follow-up from 1998 to 2003. Previously, Sweden experienced a unique epidemic of celiac disease in children below two years of age, partially explained by changes in infant feeding practices over time. Our follow-up now reveals that the increased risk for celiac disease caused by unfavourable infant dietary practices remains elevated, at least through the early school years.

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. Also, other lifestyle factors of potential importance for celiac disease development are now being explored, such as childhood vaccinations and infections early in life.

The Swedish experiences have promoted a changing view among the international research community on the aetiology of celiac disease, from deterministic to multifactorial, thus fostering prevention initiatives. We are now responsible for Sweden's contribution to a cross-national European multi-disciplinary research project [[www.preventcd.com/](http://www.preventcd.com/)] with the ultimate goal to reduce the celiac disease burden among European populations by favourable infant feeding advice.



Serological markers facilitate the screening and diagnosis of celiac disease, however a small intestinal biopsy is still necessary for disease ascertainment. Based on the multi-centre case-referent study, we are now evaluating the most promising serological markers and also considering the potential role of humane leukocyte antigen typing.

In all populations approached for celiac disease screening it has become evident that a considerable number of cases remain undetected, however to a varying extent. Therefore it is debateable whether mass screening should be recommended. We are contributing to this debate with further scientific evidence from a Swedish multi-centre screening programme, i.e. ETICS – Exploring the Iceberg of Celiacs in Sweden [[www.umu.se/phmed/epidemi/celiaki/etics/](http://www.umu.se/phmed/epidemi/celiaki/etics/)]. This programme includes 12-year old children born during the epidemic and post-epidemic years, respectively, to compare the prevalence in these cohorts of both symptomatic and previously undiagnosed celiac disease. This will further clarify whether primary prevention of celiac disease is possible, and whether mass screening for early detection and treatment is justifiable. The first part of the field phase has been successfully completed, involving 10 000 invited children out of which 7 400 participated. This phase revealed an unexpectedly high prevalence of celiac disease (3%), out of which the majority of cases were previously undiagnosed. General screening among adults also needs to be evaluated, and the ongoing Västerbotten Intervention project (VIP) would be an excellent framework for such an effort.

Moreover, we are represented in the steering committee of a growing European platform for research on prevention and treatment of celiac disease by integrating basic scientific knowledge in clinical applications and the food industry [[www.cdeussa.com/](http://www.cdeussa.com/)], which has recently started a monthly newsletter widely distributed among the celiac disease research community.

**Contact: Anneli Ivarsson**

## The occupational and living environment

### 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 carried out in cycles for all households with children less than five years throughout the eighteen month follow-up period. Nitrogen dioxide (NO<sub>2</sub>) 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 NO<sub>2</sub> 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 2005. Data cleaning of this huge dataset took up much of 2006, leading to complete material to be used for the first of at least six articles in two PhD theses.

**Contact: Anders Emmelin**

### Social insurance research

Within the field of social insurance research, a study has been carried out regarding the high incapacity rate in Västerbotten – namely the number of days with sickness allowance and disability pension. The project has been conducted together with the Social Insurance Office in Västerbotten. The aim of the study was

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 the roles of 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 administered to persons on long-term sick leave, 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 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 vast differences in attitudes and ways of treating employees, which also led to different models for dealing with the 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 knowledgeable in how to use the social insurance legislation.

A study in which the four northern counties in Sweden (Norrbotten, Västerbotten, Jämtland and Västernorrland) are compared with a county in the south of Sweden, Kronoberg, has been performed. The study focused 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 this field is now underway. Generally there were 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 about the Swedish welfare system is ongoing. The study covers three subsystems: social insurance; labour-market programmes and benefits; and social assistance. The purpose is to explore regional differences and find out whether a high cost in one subsystem is explained by a lower cost in another. The method being used is to compare cost per capita (population aged 16•64). Five counties have been selected for study. The study is based on data on seven different outcomes in 2003, collected in 52 municipalities for men and women separately. Results so far show that costs of social insurance are higher for women than for men, while the opposite is true of labour-market costs. Social assistance costs 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 social insurance costs seem to be related to weak labour markets.

A study about attitudes towards social insurance was initiated during 2004 and is still ongoing. A first anthology of this study was presented in the autumn of 2006. Approximately 20 different researchers from many disciplines are engaged in this study. The material consists of four questionnaires, 50 000 individuals plus 4 000 doctors, 8 000 employers and 5 000 social insurance officials from all over Sweden each received a questionnaire. The results show that there is a rather complex relationship between attitudes and use of sick leave.

**Contact: Curt Edlund**

## Gender and health

Does gender equality in working life lead to economic growth through better health and less sick leave?

Gender equality in a Swedish context:

- In Sweden, gender equality relates to equal opportunities, rights and responsibilities for men and women, for example, in work, which enables economic independence, in the care of children and the home, and in participation in politics, unions and other social activities;
- Since 1992, there has been a government Act on equality between women and men;

- This Act mainly relates to working life –all companies with more than 10 employees must have a plan for gender equality;
- There is an “office of the equal opportunities-ombudsman” whose job it is to monitor the implementation of the Act.

The initial hypotheses for this research are that an unequal gender system affects both men’s and women’s health in a negative sense, and that addressing this imbalance would lead to improvements for both sexes. It is also hypothesized that the current gender system depresses the production of goods and services, and a more gender equal society could positively influence economic growth.

The first part of this research involves a register study built upon data from national databases. The register study comprises 11000 companies and their employees. The data collected are position in the company, income, sick leave and parental leave. The subsequent step will be to administer a questionnaire to 3000 individuals selected from the companies.

The questionnaire will explore the division of unpaid household work, self-rated health and self-rated gender equality.

It is necessary to incorporate both the paid and the unpaid work in the analyses in order to get a complete picture of workload and stress in relation to health.

**Contact: Ann Öhman**

## Sick building syndrome in Sweden

The Office Illness Project in Northern Sweden was finalised in 1994. 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 airborne 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 is soon to be finalised. 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. Another prerequisite for the case-referent study was to find the optimal adsorbent for sampling indoor airborne volatile organic compounds. An analysis using partial least squares discriminant analysis (PLS-DA) identified which adsorbent best discriminated cases from referents. Based on chemical data from the best adsorbent, the case-referent study is now being analysed in collaboration with The Swedish Polytechnic, Vasa, Finland.

With the aim of developing better care and action programmes for patients with the above “environmental illnesses,” our studies focus on personal, psychosocial and environmental prognostic factors. We are working in an interdisciplinary project with colleagues from Occupational and Environmental Medicine, Dermatology & Venereology, the Department of Sociology, the Department of Psychology, Family Medicine and the Department of Odontology, all at 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 favourable 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 with regard to 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 a 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 of symptoms to the first

hospital or clinic visit was more than one 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 at follow-up were woman and eight percent were men..

**Contact: Berit Edvardsson**

## Nickel allergy

Nickel allergy is a common cause of hand eczema and is usually induced by ear piercing. Previous 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 been undertaken in Umeå and Örebro. Nickel allergy was verified by testing, and previous use of braces and skin piercing was recorded. Preliminary results show that the prevalence of ear piercing among girls has not increased over recent decades. Among boys, however, there is a marked increase. Piercing of locales other than the ear lobes has increased in both girls and boys. The prevalence of nickel allergy in our population is 15% among girls and 4% among boys. Our findings support previous results indicating that dental braces may induce tolerance to nickel. Articles on nickel allergy, lifestyle factors and hand eczema have been submitted or are under preparation.

**Contact: Berndt Stenberg**

## The ultimate goal – prevention of ill health

### 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. The Västerbotten Intervention Program (VIP) was developed in the municipality of Norsjö and was later disseminated to the 14 other municipalities in the county. During 2006, a total of 6878 persons at ages 40, 50 and 60 participated in VIP and more than 106000 health screenings were performed. Almost every participant has filled in a questionnaire and the VIP database now

represents one of the world's largest of its kind. Most of the participants have donated blood samples to be stored in the Northern Sweden Medical Biobank. So far (December 2006), approximately 24000 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 individual advice to people when they were 40, 50 and 60 years of age. Using the primary care system as a partner, the programme conducted systematic risk-factor screening and offered counselling by its family medicine providers. At the same time, the community intervention programme used strategies to raise public awareness.

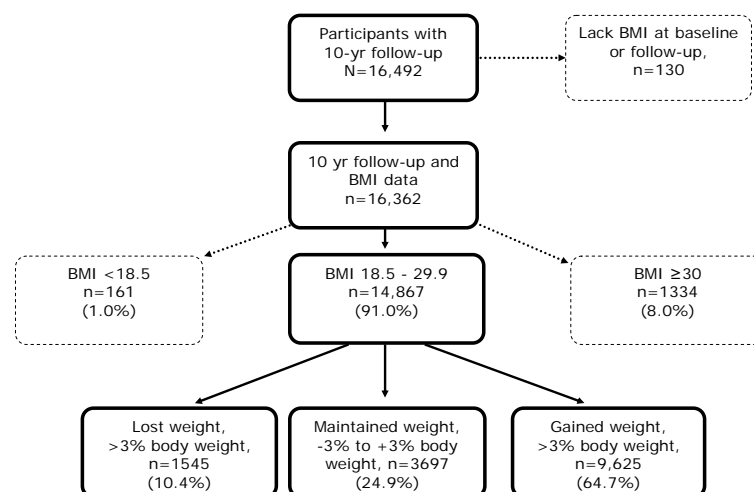
During 2005, the participation rate was 68.1%. Previous studies have confirmed that there was no social selection bias when comparing participants and non-participants. During the last decade, VIP data have been actively used for epidemiological research, development of new preventive methods in primary care, health economic evaluations, and county council health planning purposes.

With regard to primary care oriented epidemiological research, focus has been on developing new preventive methods to integrate prevention into 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 were subsequently diagnosed with type 2 diabetes after a mean time of 5 years, and 473 referents who were free from diabetes during an observation time of 8 years. The study aims to describe early perturbations during the course of type 2 diabetes. Associations between biological markers, socioeconomic factors and lifestyle and type 2 diabetes have been evaluated. Results show that individuals who are at high risk for future type 2 diabetes can be identified by measurements of three simple clinical variables: BMI; fasting glucose; and glycated haemoglobin (HbA1c). The study also shows that stress at work, measured by the Karasek demand/control model, and social support, measured as weak emotional support, also increase the risk of type 2 diabetes among women. This study has been extended to describe a model of Metabolic Syndrome (MetSy) and also to analyse the prevalence of MetSy in VIP Panels. Results indicate that
- snus-users have an increased risk of developing MetSy.
- The second research project is attempting to increase 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, whilst also attempting to explore what ex-smokers consider to be facilitating factors enabling them to quit smoking. Of specific interest in this research project is the opportunity to explore the possible role of moist snuff in facilitating middle-aged smokers in quitting. Preliminary data indicate that the role of moist snuff might be less important than tobacco producers' claim. It is anticipated that this research will add knowledge that can support primary care staff in their ambition of reducing the risk of acute myocardial infarction (AMI) and chronic obstructive pulmonary diseases.
- A third project aims to develop a risk equation, predicting the 5- and 10-year risk of developing CVD (stroke or AMI), when taking both traditional and social factors into consideration. 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 programme it will be possible to develop more accurate estimations based on data from the 1990s. For the time being, a core predictive model on myocardial infarction and another model on stroke is about to be developed, resulting in a separate (validated) risk equation for men and women for both AMI and stroke. Preliminary analysis comparing the SCORE risk prediction and actual outcome in Västerbotten County indicates the CVD mortality risk to be significantly lower in the Västerbotten population, implying that guidelines might have to be adjusted accordingly.
- A fourth project focuses on the impending obesity epidemics that are reported worldwide. Instead of looking at the obese population and studying possible strategies to reduce weight, we will focus on identifying and characterising individuals who manage to maintain weight in middle-age over a 10 year period. We will focus on the middle-aged individuals who neither gained nor lost weight

in their adult lives, the so called “primary weight maintainers”. Among VIP baseline participants during 1990-94, 24.9% had maintained their weight 10 years later (See figure below). Our analysis shows that older age, being female, being classified as overweight by BMI, later survey year, diagnosis of glucose intolerance or diabetes, and lack of snuff use increased the likelihood

of not gaining weight. This indicates that there may be a need to broaden the educational efforts to include individuals who have previously not being regarded as high-risk individuals, i.e. the young, the healthy and the lean.



Västerbotten Intervention Program Longitudinal Study participants according to Body Mass Index and Weight Change Category

- A fifth project is focusing on the upcoming obesity epidemics, reported worldwide. Instead of looking at the obese and study possible strategies to reduce weight, we would rather identify and characterise those who manage to maintain weight in middle-age during a 10 year period. We focus on the middle-aged individuals who neither gained- nor lost weight in their adult lives, the so called primary weight maintainers. Among VIP baseline participants 1990-94, 24.9% had maintained their weight 10 years later (Figure X). Our analysis shows that older age, being female, classified as overweight by BMI, later survey year, diagnosis of glucose intolerance or diabetes, and lack of snuff use increased the chance of not gaining in weight. This indicates that there may be a need to broaden the educational efforts to include the ones who were not earlier regarded as risk individuals; the young, the healthy and the lean.

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 as an inter-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 now join forces with regard to weight maintenance research.

We are 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 carried out during 1999, comprising more than 5000 individuals. Together with the 2004 cross section, there have now been 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

identify cardiovascular risk indicators. The follow-up of individuals participating in the previous MONICA cross-sectional surveys will allow for further analysis of the role of perceived health in predicting future risk factor load, and to study the interaction with socio-economic factors.

**Contact: Lars Weinehall**

### 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 of the disease.

In 1983, a similar nationwide 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 endocrinology departments and public health centres in the country. By December 2006, 9500 cases (approximately 400/year) had been reported, of which 73% were type 1 diabetes, 17% type 2 diabetes, 1.3% secondary diabetes and the remaining 9.1% were 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 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 (Waernbaum et al 2006). 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 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

**Contact: Lennarth Nyström**

### Screening for breast cancer

Few secondary interventions have been as carefully evaluated, and perhaps therefore as questioned, as mammography screening. An overview of the four randomised controlled trials (RCTs) that have been performed in Sweden was conducted by our department in order to evaluate the benefits of mammography screening in relation to breast cancer mortality. 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 breast cancer mortality in the group invited for mammography screening. Based on the results from the RCTs, the National Board of Health and Welfare issued guidelines for mammography screening in 1986. All county councils in Sweden invite women aged 50-69 for mammography screening every second year and about half of the county councils also invite women aged 40-49 and 70-74 years. New approaches have been applied to be able to evaluate whether the nationwide service-screening programme is as effective as indicated by the RCTs.

In collaboration with the Oncology 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 appropriate comparison groups. With a mean screening interval of 20 months and a mean follow-up of 7 years, the reduction in 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 onwards). 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. 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) we were able to estimate the population size that needs to be screened in order to save one life in nine counties in Sweden. 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 incidence-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 was still a significant 43% reduction in incidence-based breast cancer mortality associated with screening (relative risk, 0.57; 95% CI: 0.53-0.62).

**Contact: Lennarth Nyström**

### Personal health documents in the county of Dalarna

Personal health documents have been available since at least the 1940s. Such records focus either on disease and cure, such as traditional medical

records, or health and prevention, such as antenatal records. Personal health documents have been used worldwide in antenatal and child care. The purpose of such records has been manifold, but the 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 personal health document, "My Book About Health", has been developed, targeting the adult population. Effects on behavioural change have been reported following distribution at primary health centres, at work-sites, and by mail. The cost-effectiveness and feasibility of distribution have been compared, and community health nurses have been interviewed about their experiences. A version of the document can be found at <http://www.ltdalarna.se/minbokomhalsa>.

A health document for adolescents, 12 to 16 years of age, has also been developed. It consists of a folder with seven different booklets, named "VIP – Very Important Person". A school-based controlled study started during 2003, and 1-year and 3-year results of the intervention are being analysed. Parts of the health document can be viewed at <http://www.ltdalarna.se/vip>.

**Contact: Lars Jerdén**

### Stress-related problems among children and young people

Self-reported stress-related, psychosomatic or "socio-somatic" problems among children and young people, especially teenage girls, are increasing in Sweden. Many of the girls also report negative body image and eating disturbances. Biological, emotional, socio-cultural and gendered processes on the individual, group and societal level can be involved. However, there is a lack of research in this area. There is a need for both epidemiological and longitudinal studies, as well as for more explorative qualitative studies that "give voice" to young people, or studies that discuss the problems in relation to theoretical frameworks. There are also few studies on health promotion and preventive models for use in schools or School Health and Youth Health Centres for teenage girls and young women.

In our research project we find it important to listen to and to involve the girls themselves in an interactive research process using individual interviews, focus group discussions, diaries, questionnaires and participant observations. We

also apply an explorative and theoretical research approach in order to discuss questions such as “why girls?” and relations between processes such as “doing gender” and “doing health”. Accordingly, we are interested in socio-cultural perspectives on body image, well-being and health – the embodiment of social conditions, relations and processes. For this purpose we have constructed a theoretical framework consisting of a combination of theories from body-sociology, phenomenological physiotherapy, gender science, modern stress and trauma research, and health promotion.

The aim of this study is two-fold: 1) to increase knowledge about teenage girls'/young women's experiences and perceptions of stress-related health problems, including their body-experiences; 2) to develop models for health promotion and stress-prevention within School Health and the Youth Health Centre in Umeå.

This is a collaborative research project between the School Health Organisation in Umeå Municipality, The County Council in Västerbotten and Umeå University.

**Contact: Maria Wiklund**

### Food habits and nutritional status among adolescents in Cameroon.

Adolescence represents one of the most important developmental periods in life due to the maturing process (reproductive health) and rapid growth, both cognitive and physical. This important period serves as a gateway to adulthood and offers a unique opportunity to focus on health promotion and preventive methods that could impact the individual's health, both currently and throughout life.

The aim of the present study is to assess food intake and nutritional status of adolescents in urban and rural areas in Cameroon by using anthropometry and dietary questionnaires.

From previous studies we have found that frequencies of consumption of meat, vegetables, cereals, milk products, and junk foods were significantly higher in urban than rural adolescents. Frequency of in-between meals was higher in urban than rural adolescents. Arm muscle area (mm<sup>2</sup>) and waist/hip ratio were significantly higher in rural adolescents compared to their urban counterparts (3554 vs. 2802 and 0.82 vs. 0.79; respectively).

**Contact: Léonie Dapi Nzefa**

### Health promoting health services

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 of 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. This 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 concepts of health and health promotion, and to develop greater understanding of the obstacles and opportunities for health-promotion in practice. The methodology is both qualitative and quantitative. In 2006, a questionnaire based on information provided by health professionals in focus group discussions was answered by a stratified sample of assistant nurses, dieticians, midwives, nurses, occupational therapists, physical therapists, physicians and psychologists (n= 1200). The questionnaire study will enable an analysis of different perceptions among professionals.

**Contact: Helene Johansson**

### Social capital for Health Promotion

During the last decade “social capital” has become an attractive concept within public health research. The concept is defined in several ways, but within public health the definition by Robert Putnam has proven to be particularly useful. He defines social capital consists as “social networks and the norms of reciprocity and trustworthiness that arise from them”. Social capital draws attention to the social determinants of health, and is mainly used to explain social inequality in health. However, knowledge about the role of social capital in health promotion is still lacking. The overall objective of this research project is to investigate the prerequisites, barriers and prospects for using social capital as a resource for community-based health interventions. Two studies utilise data from an explorative qualitative case study in a small rural community in northern Sweden. The first aims to describe in-depth the existing social capital and to discuss what forms of social capital may facilitate community participation and health promotion. The second study aims to develop understanding of the mechanisms that are crucial for mobilising social capital at the community level. The third study is a systematic review of articles that include

sex and gender aspects on social capital and health. The aim is to characterise existing knowledge, and to discuss the consequences of including a gender perspective on social capital in health promotion. The fourth study is based on a “social capital survey”, distributed to 15,000 individuals in northern Sweden. This study will enable the characterisation and mapping of social capital at the neighbourhood level, which can then be analysed in relation to different health outcomes.

**Contact: Malin Ericsson**

### Swedish doctoral students' experiences

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 and the prospective student should have an individual syllabus and funding for their studies.

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 study was performed in Umeå, which included students accepted before as well as after the new regulations. The positive aspects of being a doctoral student that were described included intellectual development and a feeling that the work gave good opportunities for in-depth study in a particular field. Results show that interest in working at the university after receiving a PhD was as great for women as it was for men, although significantly fewer women actually do continue to work at the university following their studies. Insecurity, difficulty in combining an academic career with a family and negative experiences were some of the obstacles mentioned. Many emphasised the advantages of freedom in doing research, but also that there was no clear dividing line between work and leisure time, and the women in particular felt this stress.

The study shows that whilst 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 from department to department and also between faculties, ranging from how far the

doctoral student has progressed with his/her research programme at the time he/she is accepted, to widely different working conditions and research supervision for different people in different projects, or even within the same project.

In general, the doctoral students mostly find the research work itself interesting and that their supervisor shows 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. Nevertheless, the pleasure of supervision stood out in the interviews with the supervisors, and research supervision was quite often described as “exciting”, “developing” and “instructive”.

Some students do leave without having defended their thesis. There is limited knowledge about the reasons for non-completion. A qualitative study about non-completion among PhD students, exploring the students' perspectives and experiences when leaving the research education and training programme has been performed and is to be published.

**Contact: Monika Appel**

### Preventive home visits for the elderly

All over the world the number of elderly people is increasing. The fact that this development is worldwide makes reducing illness among the elderly even more important. “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 focus on the elderly population is rare. Preventive home visits for the elderly are now being evaluated using various health economic methods. The ongoing evaluation indicates that the visits have had positive effects on health, might even reduce mortality and be cost-effective. A comprehensive economic analysis has found that the costs for the visits were equal to the decreased need for health care and home help.

**Contact: Klas Göran Sahlén**

## Ageing and Living Conditions

Increasing magnitude and awareness of the growing proportion of elderly people raises questions on how living conditions are affected for both the old and the young. Is our society ready to accommodate the growing proportion of elderly people? Will a greater proportion of elderly people be seen as a burden or as an asset to society? Can insights from changes that have occurred in Sweden pave the way for better handling of forthcoming changes in other countries? What can we learn from experiences in other countries and from past experiences? Ageing and its consequences are crucial factors in relation to future living conditions in Sweden, Europe and throughout the world.

This project is characterised by interdisciplinary research addressing the interconnections between ageing, health and living conditions of the elderly – the opportunities of successful ageing.

The relationships between these research themes are influenced by processes at the individual level (biological and cognitive ageing), the population level (demographic, social and economic conditions) and the socio-cultural level (images and constructions of ageing and the old). The research is part of a collaboration between social, behavioural, medical and humanistic sciences, bridging research environments from three faculties.

This project includes quantitative as well as qualitative research approaches and joins methodological competences from different disciplines. The data sources, including the several world-unique, mainly longitudinal, databases (covering more than 400 years) developed and located in Umeå are:

- DDB – including the largest historical population database in Europe;
- BETULA - longitudinal data on cognition, health and ageing, 4500 individuals, 1988 to date;
- ASTRID – individual spatial and social-economic data for all Swedes, 1960 – 2003;
- INDEPTH - health data from various third world field sites;
- VIP – cross-sections and panels (95.000), health and socio-economic data, 1985 to date;
- DAUM – documented historical interviews with the elderly.

Due to the uniqueness and variety of data sources, this project brings together research on contemporary Sweden with studies on historical data and third world contexts, and enables the comparative analysis from a variety of time-space contexts, including indigenous sami communities.

The aim is to develop interdisciplinary research focusing on ageing and living conditions in different time-space contexts based on three overall research questions:

1. How is population ageing influenced by demographic processes?
2. How is participation of the elderly in society affected by their health and cognitive function as well as by societal demands and values?
3. What are the determinants of successful ageing - in terms of social, economic and health factors - for men and women?

One further aim is to develop new perspectives by strengthening the comparative analyses, including empirical investigation in different geographical, historical and cultural contexts, e.g. urban and rural areas in historical and contemporary Sweden, Sámi communities, immigrant groups and communities in developing countries today. In these different contexts, the intersections between age, ethnicity and gender will be scrutinised.

**Contact: Lars Lindholm**

## Multi-disciplinary gender research

Several of the projects presented in this chapter have a gender perspective (For specific projects, see above). Gender research, or public health research with a gender perspective, has gradually become an important and integral part of the research that is being conducted within our division. That in turn has its roots in long-running development of gender research at Umeå University. Gender research has existed for almost 30 years at the university and is now profiled among the university's central research strategies for the years 2004-2007. One of the most recent developments is the formation of an institutional framework for gender research – Umeå Advanced Gender Studies (UAGS). UAGS embraces all faculties at the university and is therefore broad and multi-disciplinary. In 2006, UAGS was appointed centre of research excellence by the Swedish Research Council and received a considerable research grant.

## Gender based violence research and networking

Within the UAGS framework, public health researchers from our division engage in research on gendered health issues as well as gender-based violence. The area of gender-based violence harbours research on violence against women, within a range of disciplinary milieus, including social sciences, education, arts and medicine. This research is characterised by interdisciplinary approaches and, in some cases, close relationships with policy makers. This research is chaired from our division. Some projects focus on legal, economic and social consequences of violence in a number of different settings. Other projects study constructions of male perpetrators, female victims, and violence in legal texts, as well as the health effects of violence, within Sweden as well as in several other countries. Some challenges within this area are: the risk of reproducing notions of traditional gender power structures; how to theorise and study violence against women in different ethnic communities; how to theorise violence against non-heterosexual persons, in intimate relations or as hate crimes.

In 2006, Epidemiology and Public Health Sciences took part in forming an international research network for developing research strategies and research methodologies on violence against women (VAW). This was done in collaboration with Linköping and Uppsala universities. Five senior researchers and five PhD students from the division are members of the network. The network had its first international workshop in Uppsala. Researchers from eight countries participated.

## Mainstreaming gender in demographic surveillance

This project was initiated during 2006 and aims to research gender issues in four INDEPTH demographic surveillance sites: Iganga DSS (Uganda); Fila Bavi DSS (Vietnam); CIDS DSS (Nicaragua); and Ujjain DSS, India. The project is funded by SIDA/Sarec and includes international research collaborations between the four demographic surveillance sites and the Swedish public health departments at Umeå University and The Karolinska Institute. An initial pilot study is underway using a cross-over research design.

Summary	Condensed meaning unit	Themes
<ul style="list-style-type: none"> <li>◆ Girls are not supposed to smoke, because it is inappropriate</li> </ul>	<ul style="list-style-type: none"> <li>⊙ Smoking is not for women</li> <li>⊙ Women smokers are not accepted</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Cultural resistance towards women smokers</li> </ul>
<ul style="list-style-type: none"> <li>◆ Only prostitutes and not-well mannered girls smoke</li> </ul>	<ul style="list-style-type: none"> <li>⊙ Bad impression from smoking girls</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Constructions of gender</li> </ul>
<ul style="list-style-type: none"> <li>◆ A non-smoking boy is viewed as being effeminate and not brave enough</li> </ul>	<ul style="list-style-type: none"> <li>⊙ Brave and masculine boys smoke</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Smoking is masculine</li> </ul>

Example of a qualitative analysis from focus group discussions with teenage boys about smoking in Java, Indonesia. The article was published during 2006 (N N et al, 2006)

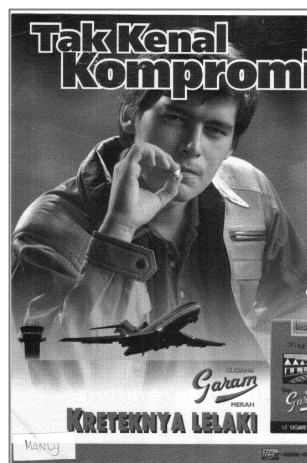
## Centre for gender studies at the Faculty of Medicine

The centre is a platform for gender researchers as well as for other researchers who are interested in gender perspectives on health and disease. Researchers from our division have been actively engaged in forming the centre and are part of the steering committee. The aim of the centre is to strengthening gender research at the medical faculty through a multi-disciplinary platform.

## The National Graduate School

Finally, a contributor to the gender research milieu at our division is The National Graduate School of Gender Studies, hosted by Umeå University together with Mid Sweden University, the University of Kalmar and the University of Gävle as partners. Two of the PhD students at Epidemiology and Public Health Sciences are enrolled in the national graduate school.

**Contact: Ann Öhman**



Tobacco advertisements addressed to young women and men in contemporary Indonesia. The ads build on traditional as well as modern perceptions of femininity and masculinity.

## 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 formed a springboard for the research projects. 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.

### Master of Public Health Programme

We have offered an international Master of Public Health (MPH) 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. Our program's internationally recognised MPH degree corresponds to this '*Magister*' of Public Health Degree.



Course in biostatistics 2006

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 has been 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 to the international perspective on Public Health from their own experiences. The number of nationalities that are attracted by the UISPH training continues to increase.



Sources of Master of Public Health students 1991-2006



Course in medical sociology 2006

To date, 328 students from 54 countries, including Sweden, have joined the programme (see map above). In the autumn of 2006, 26 new students started 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 in 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 has also sponsored two

MPH students annually from the Northern State Medical University in Archangelsk, 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 Swedes do their studies while working part time.

In 2006, 19 students completed the Masters degree, all non-Swedes, with a number of students completing their theses at home before being awarded the degree. Over the years there has been a fairly consistent sex ratio pattern, with a predominance of female students among the Swedes and a predominance of males among the non-Swedes. However, over recent years the proportion of female students from developing countries has been increasing. Among the 2006/07 MPH group of students, 50% are females.



Master seminars, May 2006

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 facilities and staff, in person or by telephone or e-mail. This system was developed in light of Umeå's position in the sparsely populated North so as to allow nation-wide recruitment of students, many of whom would combine their studies with working, frequently on a part-time basis.

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 count towards the requirements for the degree. Courses from universities outside of 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 to be equivalent to academic level training by Swedish standards can contribute to the minor subject course requirements. For students trained in health professions or in other areas with obvious Public Health content, relevant courses from previous studies can contribute to the major subject degree requirements, which can make it possible to complete the MPH part of the programme in less than two years.

The Public Health 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, an *MPH thesis* worth 20 points and *elective courses* (see below) that make up the required 80 points.

A variety of courses offered by other departments can also be included. There is mutual agreement between the university departments in Public Health within Sweden to recognise 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 in chapter 6.

<b><i>Elective courses 2006/07</i></b>	
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

In 2006, the department was faced by two new challenges: a national evaluation and the decision that Swedish universities should convert all training to follow the principles of the Bologna process.

The evaluation was part of a routine activity by the National Agency for Higher Education to evaluate all academic programmes once within a six-year cycle. The 2006 evaluation in the field of Public Health, including both post-and undergraduate levels, came in the last year of the first cycle. In the first stage of the evaluation, the entire UISPH staffs were engaged in a collective self-evaluation process which resulted in a 30 page document covering a large number of headings supplied by the evaluating group. In May, the peer review group of evaluators, including colleagues from Nordic universities and student representatives, visited Umeå for interviews with faculty, students and other staff. The report from the evaluators is due in the spring of 2007.

The last stage of the Bologna process, to actually implement the new principles in all academic training, was initiated in Swedish universities during early 2006, with the aim of launching the new programmes in the autumn of 2007. The UISPH masters programme will be revised and extended to a two-year study programme with two or more lines of specialisation. During the second half of 2006, much effort went into following and understanding the convolutions of local decision-making concerning the Bologna process.



Study visit to the youth clinic



Football at IKSU

## Summer course: Epidemiology and Field Research Methods



The summer course participants and teachers 2006

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 each 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 2006, 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 collaborations out of which the data material emanates.

Due to the large number of applicants, we decided to admit 28 participants for the summer course in 2006. Seven of the participants came from Sweden. Other countries represented were, Ethiopia, Sudan, Tanzania, Vietnam, Laos, Iran, Palestine, Russia, Mozambique, Guinea Bissau and USA.

## Research training

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

Presently (Dec 31<sup>st</sup>, 2006) 38 research students are registered at the department, 14 men and 24 women (Table 5). Seventeen PhD students have been recruited within international research collaborations, while 21 are Swedish research students. In the period 1987 - 2006, 47 PhD theses (23 by women) and 7 licentiate theses (6 by women) were defended at the department. Twenty-two of the PhD theses and 5 of the licentiate theses were defended by international research students.

Several of the research students at the department are also affiliated with another department, 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.

Our unit is responsible for a major part of the basic research-training course of the Medical Faculty, and since 1997 we have also offered an advanced course in applied biostatistics with computer applications. Research students often also use the yearly summer course and the

courses included in the Master of Public Health programme as part of their research-training.

## Single courses

All courses within the MPH programme can be taken as separate courses by students not wishing to take the whole MPH degree. Priority is given to those studying for the degree, but a number of non-programme students are always accepted as well. This is especially true with regards to the research method oriented courses, such as *Qualitative Methodology*, *Epidemiology* and *Biostatistics*, as we see it as essential that these subjects 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-point course in *Epidemiology and biostatistics*. In the autumn 2006 course, 28 students participated.

## UISPH involvement in teaching outside Sweden

In addition to 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.

In 2006, the existing collaboration with the Northern State Medical University in Archangelsk, Russia, took a step closer towards creating a School of Public Health in Archangelsk. A Nordic network was formed, with member departments in the universities of Umeå, Tromsø, Tampere, Mid-Sweden and the Nordic School of Public Health in Gothenburg. Funding was received from the Norwegian Ministry of Health for a training programme based on teaching, mainly in Archangelsk, by teachers from the network institutions and with young Russian co-teachers, many of them alumni from the Umeå International School of Public Health.

**Table 4.** Seminars at the department 2006.

January	<b>Gerdien Dalmeijer.</b> Having celiac disease, what are the consequences for quality of life? <b>Anna Månsdotter</b> (Pre-dissertation) Public Health, Economics, and Feminism on judging the fairness and reform
February	<b>Niklas Rudholm och Jörgen Hellström.</b> Matchningsmetoder, selektionsproblem och hälsoekonomiska utvärderingar. <b>Julie Sorensen.</b> Social marketing of roll-over protective structures <b>Hussein Kidanto</b> (PhD proposal) Maternal and perinatal audit at a university teaching hospital in Dar es Salaam, Tanzania
March	<b>Mike Rowson.</b> The Global Health Watch 2005-2006: An alternative world health report <b>Nils Oscarsson</b> (Dissertation) Health economic evaluation methods for decision-making in preventive dentistry <b>Fyson Kasenga.</b> (PhD proposal) Demand and adherence of a PMTCT programme in rural Malawi <b>Ann Sörlin.</b> Gender Equality, Work and Health <b>Hoang Van Minh</b> (Pre-dissertation) Characterising health transition in rural Vietnam: what do patterns of cardiovascular mortality and risk factors tell us? <b>Nawi Ng</b> (Pre-dissertation) Chronic disease risk factors in a transitional country – the case of rural Indonesia <b>Lars Hagberg</b> (Midterm seminar) Physical activity has to be fun - cost-effectiveness of promoting physical activity in health care <b>Rubina Shaheen</b> (Midterm seminar) Food supplementation to malnourished pregnant women in Bangladesh; effectiveness, costs, and equity <b>Adam Taube.</b> Working with statistics in Africa
April	<b>Anna Månsdotter</b> (Dissertation) Public Health, Economics, and Feminism on judging the fairness and reform
May	<b>Tomas Ndaluka</b> (PhD proposal) The role of social capital in HIV/AIDS interventions <b>Denny Vägerö.</b> Do health inequalities persist in the new global order? <b>Kerstin Edin</b> (Pre-dissertation) Viewpoints on intimate partner violence. A Swedish study with certain focus on gender and on the period of pregnancy. <b>Kathy Kahn</b> (Midterm seminar) Dying to make fresh start. Mortality and health transition in a new South Africa <b>Nawi Ng</b> (Dissertation) Chronic disease risk factors in a transitional country – the case of rural Indonesia <b>Hoang Van Minh</b> (Dissertation) Characterising health transition in rural Vietnam: what do patterns of cardiovascular mortality and risk factors tell us?
June	<b>S'celo Dlamini</b> (PhD proposal) Adherence to anti-retroviral therapy in KwaZulu-Natal <b>Ari Probandari</b> (PhD proposal) Capturing the potentials and barriers of scaling up DOTS in hospitals of Java Island, Indonesia <b>Dao Lan Huong</b> (Pre-dissertation) Mortality in transitional Vietnam <b>Fikru Tesfaye</b> (Midterm seminar) Surveillance methods for NCD risk factors in Ethiopia <b>Anna Myleus</b> (PhD proposal) The Swedish Epidemic of Celiac Disease Explored by Epidemiological Research Methods
August	<b>Katrina Nordyke</b> (PhD proposal) Mass screening for celiac disease. A public health intervention from the perspectives of participants and society
September	<b>Ann Nafziger</b> (Pre-dissertation) A population perspective on obesity prevention: Lessons learned from Sweden and the US <b>Kerstin Edin</b> (Dissertation) Perspectives on intimate partner violence- focusing on the period of pregnancy <b>Anna Rosén</b> (PhD proposal) The complexity of celiac disease. Increasing the understanding of the disease by utilizing epidemiological and genetic research methods
October	<b>Pham Thai Son</b> (PhD proposal) The management of hypertensive individuals at the community level in rural Vietnam - an intervention study <b>Dao Lan Huong</b> (Dissertation) Mortality in transitional Vietnam <b>Ed Fotrell</b> (Midterm seminar) Methodological issues in mortality surveillance in demographic surveillance sites
November	<b>Ann Nafziger</b> (Dissertation) A population perspective on obesity prevention: Lessons learned from Sweden and the US <b>Margareta Norberg</b> (Pre-dissertation) Assessing risk of future type 2 diabetes in a Swedish population – From molecules to life style habits <b>Lars Hagberg</b> (Pre-dissertation) Physical activity has to be fun! Health economic analysis of promoting physical activity in health care
December	<b>Kathy Kahn</b> (Dissertation) Dying to make a fresh start. Mortality and health transition in a new South Africa <b>Steve Tollman</b> (Midterm seminar) Close scrutiny: Evaluating the strengths, limitations and potential of health and demographic surveillance in developing countries

**Table 5.** Doctoral students registered at the division 2006.

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 (Diss. 060922)	Väld i samband med graviditet och barnafödande – kvinnan, barnet och mannen
Anders Emmelin	BSc, health inspector	Air pollution epidemiology
Malin Eriksson	Social worker	Socialt kapital som verksam resurs i befolkningsriktade 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
Elli Nur Hayati	Psychologist	Domestic violence in urban and rural Indonesia: Women's experiences and men's roles for prevention
Dao Lan Huong	MD (Diss. 061019)	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
Kathleen Kahn	MD (Diss. 061211)	Mortality and health transition in a new South Africa
Faustine Kalengayi	MD	A world on the move: Challenges and opportunities for HIV/AIDS/TB Prevention and care for immigrants from countries in sub-Saharan Africa
Fyson Kasenga	MD	Demand and adherence of a Prevention of mother to child transmission (PMTCT) of HIV programme in rural Malawi
Rose Laisser	Midwife	Health worker's and community groups' perceptions about intimate partner violence and their roles in care and prevention in Tanzania
Gunnar Lundqvist	MD	Tobaksvanor hos medelålders västerbottningar. Risk faktormönster, rökstoppssätttyder 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 Myleus	Med stud	The Swedish Epidemic of Celiac Disease in Children. Aetiology and clinical expression explored by epidemiological research methods
Anna Månsdotter	Economist (Diss. 060407)	Hälsoekonomisk utvärdering i ett genusperspektiv
Anne Nafziger	Cardiologist (Diss. 061102)	Obesity in predominantly rural areas: comparisons of northern Sweden and upstate New York, USA
Nawi Ng	MD (Diss. 060419)	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
Katrina Nordyke	Nurse	Mass screening for celiac disease. A public health intervention from the perspectives of participants and society
Leonie Dapi Nzeifa	Nutritionist	Food habits of school children in relation to socioeconomic and cultural factors in Cameroon
Nils Oscarsson	OD, dentist (Diss. 060301)	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
Zainonisa Petersen	MSc, BA	A patient-centred smoking cessation intervention – Barriers and promoting factors to smoking cessation as perceived by pregnant women
Ari Probandari	MD	Capturing the potentials and the barriers of scaling up directly observed treatment short-course (DOTS) in hospitals on Java island, Indonesia
Anna Rosén	MD	Exploring the complexity of celiac disease
Klas-Göran Sahlén	Nurse	Missgynnna 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
Julie Sorensen	Antropologist	Changing risk perceptions and safety-related behaviours associated with tractor rollovers in New York farmers
Ann Sörlin	Physiotherapist	Jämställdhet och hälsa – utvecklandet av ett jämställdhetsinstrument
Fikru Tesfaye	MD, Community health	Surveillance of risk factors for non-communicable diseases in Butajira district, Ehtiopia
Fatwa Sari Tetra Dewi	MD	Tobacco control activities in southern area of Java
Susanne Waldau	Journalist	An organisational strategy for priority setting in health care
Hoang Van Minh	MD (Diss. 060419)	Cardiovascular diseases in Bavi district, Vietnam: A journey from the past to the future
Maria Wiklund	Physiotherapist	"Kroppsjag, empowerment och välbefinnande" - Prevention och hälsofrämjande för tonårsflickor med stressrelaterad & psykosomatisk ohälsa

**Table 6.** Visiting scientists and guest researchers at the division during 2006.

Bangladesh	Rubina Shaheen	ICDDR, Dhaka
Cameroon	Leonie Prudence Dapi Nzefa	Medicine and Biomedical Sciences, University of Yaoundé
Congo	Faustine Kabibi	Congo Kinshasa
Denmark	Finn Kamper Jørgensen	National Public Health Institute, Copenhagen
Ecuador	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
	Abera Kumie	Community Health Department, Addis Ababa University
Indonesia	Endy Paryanto Prawirohartono	Public Health, Gadjah Mada University, Jogjakarta
	Ekawaty Haksari	Dept of Child Health, Sardjito Hospital/School of Medicine, Gadjah Mada University, Jogjakarta
	Nawi Ng	Public Health, Gadjah Mada University, Jogjakarta
	Adi Utarini	Public Health, Gadjah Mada University, Jogjakarta
	Ari Probandari	Public Health, Sebelas Maret University, Surakarta
	Muhammad Hakimi	Public Health, Gadjah Mada University, Jogjakarta
	Firdy Permana	Public Health, Gadjah Mada University, Jogjakarta
	Fatwa Sari Tetra Dewi	Public Health, Gadjah Mada University, Jogjakarta
Kenya	Alex C Ezeh	African Population and Health Research Center, Nairobi
Malawi	Fyson Kasenga	Malamulo SDA Hospital, Makwasa
Nicaragua	Elliette Valladares	CIDS, UNAN-León, León
	Rodolfo Peña	CIDS, UNAN-León, León
	Andres Hererra	Preventive Medicine, UNAN-León, León
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
	Mark Collins	University of the Witwatersrand, Agincourt Health & Population Unit,
	S'celo Dlamini	Department of Health of KwaZulu-Natal
Sweden	Adam Taube	Stockholm
	Denny Vägerö,	CHES, Stockholm
Tanzania	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
	Joe Lugalla	Dept of Anthropology University of New Hampshire, USA
	Willy Urassa	Dept of Microbiology/Immunology, MUCHS, Dar es Salaam
	Aldin Muatembel	Dept of Kiswahili, University of Dar es Salaam, Dar es Salaam
	Hussein Kidanto	Dept of Obstetrics and Gynaecology, MUCHS, Dar es Salaam
	Projestine Puganyizi	Dept of Obstetrics and Gynaecology, MUCHS, Dar es Salaam
	David Urassa	Dept of Community Health, MUCHS, Dar es Salaam
USA	Paul Jenkins	Basset Research Institute, Cooperstown, New York
	Anne Nafziger	Basset Research Institute, Cooperstown, New York
	Julie Sorensen	New York Center for Agricultural Medicine and Health, Basset Research Institute, Cooperstown
UK	John Porter	London School of Hygiene and Tropical Medicine
	Edward Fottrell	Nottingham
	Mike Rowson	University College, London
Vietnam	Nguyen Xuan Than	Medical Economics, Hanoi Medical University, Hanoi
	Dao Lan Huong	Institute of Health Strategy and Policy, Hanoi
	Hoang Van Minh	Public Health, Hanoi Medical University, Hanoi
	Hoang Minh Hang	Hanoi Medical University, Hanoi
	Nguyen Thi Bich Thuan	Ministry of Health, Hanoi
	Le Van Hoi	Public Health, Hanoi Medical University, Hanoi
	Chuc Nguyen Thi Kim	Institute of Health Strategy and Policy, Hanoi
	Pham Thai Son	Vietnam National Heart Institute, 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 2006 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 2006 six such grants were administered by our department. Reports from all the field studies are now being published in a report series.

### Scandinavian Journal of Public Health

We have entered our 8th 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. He is also chairing a strategic group to explore the future of the journal. A major scenario for discussion is how the journal should meet the pressure on financing paper journals and whether we should transform into a so called Open Access journal.

This year's Editorial Board meeting was hosted by Krisela Steyn and the Medical Research Council in Cape Town, pictorially illustrated below.



**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-
Kjerstin Dahlblom	Swedish assistant coordinator – UNAN-León - Sida/Sarec Research Cooperation Programme	2006-2008
Curt Edlund	Co-ordinator of a national network in Research of Sickness (SPID)	1999-
Ulf Högberg	Swedish coordinator – UNAN-León - Sida/Sarec Research Cooperation Programme	2006-2008
Anneli Ivarsson	Member of the Working Group on Celiac Disease within the Swedish Paediatric Associations Section Gastroenterology and Nutrition	1991-
	Member of the board for the department of Public Health and Clinical Medicine, Umeå University	2004-
	Paediatric expert of a Health Promotion Child and Adolescent effort (Salut) within the County of Västerbotten	2004-
	Member of the steering committee of the European Multi-stakeholder Platform of Experts on Celiac Disease Prevention and Treatment	2005-
	Paediatric expert of an Adolescent Lifestyle Survey (Leva) in Umeå and nearby municipalities.	2006-
Urban Janlert	Deputy chairman of SEEC (East Europe Committee of the Swedish Health Care Community) scientific advisory group	2006-
	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-
	Board member of Umeå Center for Evaluation Research	2000-
Lars Lindholm	Board member of the National Expert Group on A Health Promoting Medical Service, organised by the National Public Health Institute	2003-
Lennarth 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	Member of 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 CHES, 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, 2008
	Editorial consultant to the Ethiopian Journal of Health Development	2002-
Lars Weinehall	Member of the scientific priority committee for behavioural science and community medicine at the Bank of Sweden Fund	2005-
	Chair 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-
	Member of the Swedish Nutritional Foundation's Nutrition Council	2006

## 6. PUBLICATIONS

### Original articles

1. Asplund K, Eliasson M, **Janlert U**, Stegmayr B. Vad MONICA har lärt oss om hjärt-kärlsjukdom - liksom om samhälle, folkhälsa och sjukvård. *Läkartidningen*. 2006; 103: 3006-11. [In Swedish].
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4. Blomquist H, **Bergström E**. Obesity in 4-year-old children more prevalent in girls and in municipalities with a low socioeconomic level. *Acta Paediatr*. 2007; 96: 113-6.
5. Bordas P, Jonsson H, **Nyström L**, Lenner P. Survival from invasive breast cancer among interval cases in the mammography screening programmes of northern Sweden. *Breast* 2006 Jul 27; [Epub ahead of print]
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9. **Edin KE**, **Dahlgren L**, **Högberg U** Lalos A. "The pregnancy put he screws on", discourses of professionals working with men inclined to violence. *Men and Masculinities*. In press.
10. **Edin KE**, Lalos A, **Högberg U**, **Dahlgren L**. Violent men: ordinary and deviant. Discourses of professionals with men inclined to violence. *The Journal of Interpersonal Violence*. In press.
11. **Edlund C**. Epidemiology, Health Economics and Socialmedical Implications In Suppl about Whiplash. *Eur Spine J*. In press.
12. Eliasson M, **Janlert U**, Jansson JH, Stegmayr B. Time trends in population cholesterol levels 1986-2004: influence of lipid-lowering drugs, obesity, smoking and educational level. The northern Sweden MONICA study. *J Intern Med* 2006; 260: 551-9.
13. Ellberg L, **Högberg U**, Lundman B, **Lindholm L**. Satisfying parents' preferences with regard to postnatal care is cost-minimizing. *Acta Obstet Gynecol Scand* 2006; 85: 175-81.
14. **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.
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## Submitted articles

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