Umeå International School of Public Health

Epidemiology and Public Health Sciences

Department of Public Health and Clinical Medicine

Annual Report 2004

International Public Health in Umeå

Umeå International School of Public Health

www.umu.se/phmed/epidemi

Foreword

This Annual Report is the 17th since we were established as an independent research and teaching milieu. We thus try to picture this in quantitative and qualitative terms (chapter 1) and to mirror some significant developments lately that are sure to impact on the near to mid-distant future of our activities (chapter 2). This, however, does not claim to be representative of our overall agenda. As in previous Annual Reports research activities are outlined along three problem areas – etiological, social and interventive public health research and under which specific projects are described and may appear not just once. Subsequently we describe the international teaching mandate of UISPH (chapter 4) as well as our advocacy mandate (chapter 5).

The above developments relate partly to the formalization of a long-term collaboration with the Västerbotten County Council that during the year has enabled the appointment of Anneli Ivarsson on a senior lecturer post in epidemiology with special emphasis on child health, the financial support for doctoral programmes on health promotion as well as scholarships attached to UISPH.

During 2004 we have seen five PhD students successfully defend their theses – Jeremiah Chikovore (on men´s role in reproductive health in Zimbabwe), Ninuk Sri Hartini (on the nutrition of pregnant women during the economic crisis in Indonesia), Torbjörn Lind (on micronutrients during infancy and childhood in Indonesia and Sweden), Maria Emmelin (on selfrated health in public health evaluation) and Hoang Minh Hang (on the epidemiology of injuries in rural Vietnam). Ten new doctoral students have been admitted during the year - Malin Eriksson (on social capital and health), Maria Wiklund (on a gender perspective on stress and psychosomatic problems in teenage girls), Helene Johansson (on health promotion perspectives among health professionals), Klas-Göran Sahlén (on health promotion among the elderly), Leonie Dapa Nfeza (on food habits of school children in Cameroon), Emil Löfroth (on resource allocation in the prevention of CVD), Sven Hassler (on health conditions of the Sami population in Sweden), Firdy Permana (on health hazards among young passive smokers), Per Nordin (on the statistics of health care needs) and Dao Lan Huong (on the assessment of mortality patterns in rural Vietnam).

A significant characteristic of our environment is that of international collaborations, not the least with so called southern institutions. It is rewarding to see that all of these have been sustainable enough to remain and develop over decades, some starting already during the 80´s, others during the 90´s and some more recently. As partners we are pleased to see how these distant but emotionally close collaborating brother and sister institutions have changed into self-reliance and that we are still counted and counted on. Thus, in Nicaragua there is now a full-blown Centre for Demographic and Health Research in Leon (CIDS) with their own regional MPH programme, in Ethiopia a School of Public Health is emerging with their own PhD programme, in Tanzania data from the Kagera project continue to predict that the HIV enemy may be fought back, in Vietnam FilaBavi has now become the expected recognized epidemiological field laboratory and that hosted the Annual Meeting of INDEPTH (the International Network of some 40 field sites in Africa, Asia and Latin America) during 2004 and in Indonesia the collaboration has re-booted and broadened with new PhD students under the umbrella of the epidemiological transition and preventability of non-communicable diseases.

During 2004 we celebrated four 60-year olds, Erik, Hans, Lasse and Lennarth, a true sign of the maturity of our setting.

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

Printed by Print & Media, Umeå, Sweden 2005

Contents

page

PhD events during 2004

The opponent Rita Liljeström and Jeremiah

Jeremiah and his wife

Jeremiah Chicovore, thesis defence

The opponent Hans Rosling and Ninuk

Traditional Indonesian food

Ninuk Sri Hartini, thesis defence

Torbjörn Lind, thesis defence

The opponent Per-Olof Östergren and Maria

Traditional *Spettekaka* from Skåne

Maria Emmelin, thesis defence

Hang and her husband together with the opponent Ruth Bonita

The Vietnamese choir

Hoang Minh Hang, thesis defence

Jeremiah Chicovore

Gender power dynamics in sexual and reprodutive health. A qualitative study in Chiredzi District, Zimbabwe

Thesis defended: 12 March 2004
Opponent: Professor Rita Liljeström
Supervisors: Gunilla Lindmark and Lennarth Nyström

This thesis presents perspectives of men regarding abortion, contraceptive use and sexuality. Contrary to what we had expected, men expressed anxiety over abortion and contraceptive use, not because the issues concerned women's health, but rather because men associated them with extramarital sexual activity they thought women were concealing. To understand the meanings of sexuality and factors shaping these meanings appeared to be a necessary step in promoting women's health. We thus included in the study participants with different characteristics including men, women and adolescents, and used a variety of qualitative methods to explore in-depth these issues.

Men's anxiety over wives' sexuality seemed to be exacerbated by their separation from the family through labour migration, and their inability to play the expected role of the family breadwinner. The men described using different strategies to ensure their wives did not use contraceptives. Men's perspectives and the related dynamics seem therefore to be a manifestation of contradictory experiences of gender power within contexts of spousal separation.

The thesis also illuminates the paradoxical situation of adolescents and adolescent sexual and reproductive health. As guardians, the men described how they are intolerant to premarital sex and pregnancy, which might threaten the expected bride wealth from the marriage of a daughter or sister. They therefore respond with violence. Ironically, information or service which would enable unmarried girls to prevent pregnancy is also denied. This is so in spite of the great concern by families over premarital pregnancy, and common knowledge that young girls are sexually abused by adult men. The men and boys described the pressure they exert on the girls for sex, but also how they then blame the girls for deliberately becoming pregnant in order to trap them into marriage. The boys are nevertheless anxious about pregnancy also for fear of family violence and the threat of being forced to terminate schooling. The girls expressed feeling trapped between the violence from guardians and partners, a situation which may lead to unsafe abortion.

The silence, denial and violence imply the young people generally cannot discuss sexual abuse or abortion with parents, or seek health care when needed. Rather, sexually transmitted infections may be ndured or even self-treated, and abortion sought in silence. Preventive actions such as condom use are similarly difficult for the youth. The knowledge the youth may have about AIDS may also simply become a burden when room for applying it is limited.

This thesis challenges public health promotion approaches that assume firstly a universal manifestation of gender power, and secondly ability of individuals to effect behaviour change once provided with information regardless of contextual factors. Whether in AIDS education or involvement of men in sexual and reproductive health, understanding social contexts and dynamics, and identities and experiences within these contexts is crucial.

Ninuk Sri Hartini

Food habits, dietary intake and nutritional status during economic crisis among pregnant women in Central Java, Indonesia

Thesis defended: 26 March 2004
Opponent: Professor Hans Rosling, IHCAR, Karolinska Institute
Supervisors: Anna Winkvist and Lars Lindholm

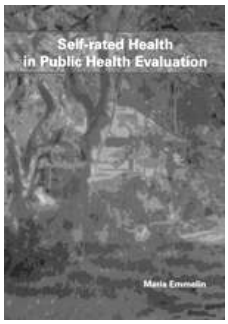
Objectives: The overall objective of this thesis was to study the effect of the economic crisis on food habits, dietary intake and nutritional status among pregnant women in Purworejo District, Central Java, Indonesia.

Subjects and methods: Since 1994, the Community Health and Nutrition Research Laboratories (CHN-RL), Gadjah Mada University, Jogjakarta, Indonesia have operated a surveillance system in Purworejo District, Central Java, Indonesia. Between 1996 and 1998, a monthly monitoring of new pregnancies took place within the surveillance system. This project included a detailed evaluation of dietary intake during pregnancy. Each trimester six repeated 24-hour recalls were conducted on 450 pregnant women. Weight and mid-upper arm circumference (MUAC) were measured monthly, height and serum ferritin concentration was measured once. Here, the dietary intake and nutritional status of the women during the second trimester are evaluated in relation to the emergence of the economic crisis, that started in 1997. Women were classified into four socio-economic groups. A computer program (Inafood) was developed to calculate nutrient intake. To support the quantitative results, a qualitative study was carried out between January and June 1999. Focus group discussions were held with four groups of women, in-depth interviews with 16 women, three traditional birth attendants and four midwives, and observations were carried out with four women. Here, food habits and coping strategies in relation to the economic crisis were explored.

Results: Before the crisis, more than 80% of the pregnant women had inadequate energy and 40% had inadequate protein and vitamin A intake. All women had inadequate calcium and iron intake. The food intake consisted of rice, nuts and pulses and vegetables, meaning that it was mainly plant-based food. Rice behaved as a strongly inferior good in economic term, meaning that its consumption increased in spite of its price increase. Rice remained an important supplier of energy, protein and carbohydrates also during the crisis. Especially, rural, poor women with access to rice fields increased their rice intake and decreased their intake of non-rice staple foods. Reasons for the continued rice intake included the women had been accustomed to eating rice since they were born and that cooking methods for non-rice staple foods were difficult. The intake of animal food was low initially and decreased further during the economic crisis. Rich women decreased their intake of fat. The intake of nuts and pulses and vegetables increased for most groups. Nuts and pulses were an important supplier of calcium and iron, and vegetables were an important supplier of vitamin A. The rural, poor women with access to rice fields kept their food taboos also during the crisis. Rich women were able to maintain a good nutrient intake during the crisis, although fat intake decreased. Also, urban poor and rural, poor, landless women had an increased intake “during crisis” because relatives and neighbour provided some foods and perhaps also because of the government support programme.

Conclusion: Before the crisis, energy and nutrient intake of pregnant women were inadequate. The food pattern of the women was predominately plant-based. Rich women were able to maintain a good nutrient intake during the crisis, although fat intake decreased. Rural poor women with access to rice fields had a higher rice intake than other groups throughout the crisis. Urban poor and rural poor, landless women experienced a decreased intake of most nutrients in the transition period but an increased intake during the crisis, reflecting government intervention and support from relatives and neighbours. The latter, however, is not sustainable. Thus, vulnerable groups are at risk of developing nutritional deficiencies without food support programmes.

Maria Emmelin



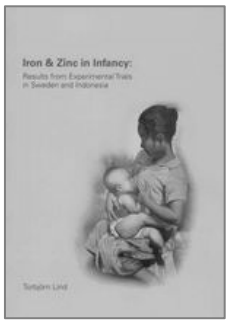
Self-rated health in public health evaluation

Thesis defended: 23 April 2004
Opponent: Professor Per-Olov Östergren, Community Medicine, Malmö
Supervisors: Lars Dahlgren and Stig Wall

There is still a debate concerning the evidence base for community interventions. The randomised clinical trial design (RCT) is increasingly challenged as a gold standard for their evaluation. This thesis takes the Norsjö health programme in Västerbotten as the starting point for a discussion about the ethical platform of community interventions and for exploring the role of self-rated health. The specific objectives are: 1) to better understand barriers to community participation and to assess the role of ethical premises among decision-makers, 2) to explore how health related norms and attitudes interact with self-rated health and the risk factor outcome of an intervention and 3) to analyse the gender and socio-cultural interplay of self-rated health with biomedical risk factors for cardiovascular disease.

The participation and views of different actors in the planning and implementation phases of the intervention were studied by contrasting information between official documents, interviews with decision makers and professionals and questionnaires to community members. The role of basic values in setting priorities and choosing intervention strategies utilised a questionnaire design with hypothetical scenarios sent to a representative sample of Swedish health care politicians. Qualitative research interviews were used to explore health related norms and attitudes. Health examination measurements and questionnaire data formed the basis for analysis of the development of self-rated health and risk factor load during a 10-year follow-up of the intervention. Access to a stroke registry enabled a case-referent approach for studying the interaction between bio-medical risk factors, socio-demographic factors and self-rated health. Data from the Västerbotten Intervention Programme (VIP) could be utilised for a cross-country comparison with a "sister project" in Otsego, U.S.A.

The results point to both strengths and limitations of the efforts made to involve people in the intervention. The problem definition mainly remained with the professionals and participation as a goal in itself, strengthening local democracy was felt to be an exaggerated ambition. However, there was an overall agreement about the seriousness of the health problem, the need to intervene and about the implementation mode. Self-rated health and reported behavioural change were important indicators of participation and young men with bad health seemed to have been least involved. Among Swedish health care politicians there was an overall agreement to allocate resources for prevention directed towards communities when there are serious health problems. The majority preferred an intervention strategy that involved primary health care. The risk of harm by creating some degree of anxiety or stigma was for many considered an acceptable drawback of a successful intervention. The follow-up study revealed a positive risk factor reduction accompanied by a positive development of self-rated health, especially for men. Additional support for an intervention effect was given through a comparison with a reference area. The interaction pattern between risk reduction and self-rated health was more polarised for men than for women, with a corresponding pattern for the lower compared to the higher educated. These results could be linked to a transition in the health related norm system and to "ideal types" representing attitudinal sets towards the intervention. The case-referent analysis suggested an interaction effect between self-rated health and bio-medical risk factor load in predicting stroke that was greater for men than for women. The cross-country comparison revealed a stronger influence of education in the U.S.A. The lower educated, with a high risk load, had a greater risk of self-rated poor health than their Swedish counterparts. The thesis suggests that self-rated health is an unexplored indicator, potentially important for understanding the complexity of community interventions. Self-rated health may predict disease development as well as modify the impact of established risk factors.



Torbjörn Lind

Iron and zinc in infancy: Results from experimental trials in Sweden and Indonesia

Thesis defended: 28 May 2004
Opponent: Professor Robert Black, Johns Hopkins School of Public Health, Baltimore, USA
Supervisors: Lars Åke Persson och Olle Hernell

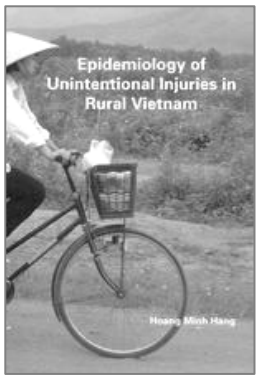
Background: Iron and zinc are difficult to provide in sufficient amounts in complementary foods to infants world-wide, resulting in high prevalence of both iron and zinc deficiency. These deficiency states cause anemia, delayed neurodevelopment, impaired growth, and increased susceptibility to infections such as diarrhea and respiratory infections.

Design: Two different intervention strategies; reduction of a possible inhibitor of iron and zinc absorption, i.e. phytate, or supplementation with iron and zinc, were applied to two different populations in order to improve iron and zinc nutrition: In a high-income population (Umeå, Sweden), the amount of phytate in commonly consumed infant cereals was reduced. Healthy, term infants (n=300) were at 6 mo of age randomized to phytate-reduced infant cereals, conventional infant cereals, or infant formula and porridge. In a low income population (Purworejo, Indonesia), daily iron and zinc supplementation was given. Healthy, term infants (n=680) were at 6 mo randomized to supplementation with iron, zinc, a combination of iron and zinc, or placebo. Blood samples, anthropometrical measurements, and data on infant neurodevelopment and morbidity were collected. Also, in the Swedish study, detailed information on the dietary intake was recorded.

Results: In the Swedish study, the reduction of phytate had little effect on iron and zinc status, growth, development or incidence of diarrhea or respiratory infections, possibly due to the presence of high contents of ascorbic acid, which may counteract the negative effects of phytate. In the Indonesian study, significant negative interaction between iron and zinc was evident for several of the outcomes; Hb and serum ferritin improved more in the iron only group compared to placebo or the combined iron and zinc group. Further, supplementation with iron alone improved infant psychomotor development and knee-heel length, whereas supplementation with zinc alone improved weight and knee-heel length compared to placebo. Combined iron and zinc supplementation did decrease the prevalence of iron deficiency anemia and low serum zinc, but had no other positive effects. Vomiting was more common in the combined group. Analyses of dietary intake from the Swedish study showed that dietary iron intake in the 6-11 mo period was significantly associated with Hb, but not serum ferritin at 9 and 12 mo, whereas the opposite was true in the 12-17 mo period, i.e. dietary iron intake was significantly associated with serum ferritin, but not Hb at 18 mo.

Conclusions: The phytate content of commercial infant cereals does not seem to contribute to poor iron and zinc status of Swedish infants as feared. However, the current definitions of iron and zinc deficiency in infancy may overestimate the problem, and a change in the recommended cutoffs is suggested. These studies also indicate that dietary iron is preferably channeled towards erythropoiesis during infancy, but to an increasing amount channeled towards storage in early childhood. This suggests that in evaluating dietary programs, Hb may be superior in monitoring response to dietary iron in infancy, whereas S-Ft may respond better later in childhood. However, as shown in this study, increasing Hb may not necessarily be an indicator of iron deficiency, as more dietary iron increased Hb regardless of iron status. In the low-income setting combined supplementation with iron and zinc resulted in significant negative interaction. Thus, it is not possible to recommend routine iron-zinc supplementation at the molar concentration and mode used in this study. It is imperative that further research efforts are focused at finding cost-effective strategies to prevent iron and zinc deficiency in low-income populations.

Hoang Minh Hang



Epidemiology of unintentional injuries in rural Vietnam

Thesis defended: 15 October 2004
Opponent: Professor Ruth Bonita, WHO, Geneva
Supervisors: Peter Byass and Ton That Bach

The main objective of this epidemiological study was to assess the incidence of unintentional non-fatal injuries, together with their determinants and consequences, in a defined Vietnamese population, thus providing a basis for future prevention. A one-year follow-up survey involved four quarterly cross-sectional household injury interviews during 2000. This cohort study was based within a demographic surveillance site in Bavi district, northern Vietnam, which provides detailed, longitudinal information in a continuous and systematic way. Findings relate to three phases of the injury process: before, during and after injury.

The study showed that unintentional non-fatal injuries were an important health problem in rural Vietnam. The high incidence rate of 89/1000 pyar reflected almost one tenth of the population being injured every year. Home injuries were found to be most common, often due to a lack of proper kitchens and dangerous surroundings in the home. Road traffic injuries were less common but tended to be more severe, with longer periods of disability and higher unit costs compared with other types of injury. The leading mechanisms of injury were impacts with other objects, falls, cuts and crushing. Males had higher injury incidence rates than females except among the elderly. Elderly females were often injured due to falls in the home. Being male or elderly were significant risk factors for injury. Poverty was a risk factor for injuries in general and specifically for home and work related injuries, but not for road traffic injuries. The middle income group was at higher risk of traffic injuries, possibly due to their greater mobility.

Injuries not only affected people's health, but were also a great financial burden. The cost of an injury, on average, corresponded to approximately 1.3 months of earned income, increasing to 7 months for a severe injury. Ninety percent of the economic burden of injury fell on households, only 8% on government and 2% on health insurance agencies. Self-treatment was the most common way of treating injuries (51.7%), even in some cases of severe injury. There was a low rate of use of public health services (23.2%) among injury patients, similar to private healthcare (22.4%). High cost, long distances, residence in mountains, being female and coming from ethnic minorities were barriers for seeking health services. People with health insurance sought care more, but the coverage of health insurance was very low.

Some prevention strategies might include education and raising awareness about the possible dangers of injury and the importance of seeking appropriate care following injury. To avoid household hazards, several strategies could be used: better light in the evening, making gravel paths around the house, clearing moss to avoid slipping, wearing protective clothing when using electrical equipment and improving kitchens. Similarly, improving road surfaces, having separate paths for pedestrians and cyclists and better driver training could reduce road accidents.

In Vietnam, and especially in a rural district without any injury register system, a community-based survey of unintentional injuries has been shown to be a feasible approach to injury assessment. It gave more complete results than could have been obtained from facility-based studies and led to the definition of possible prevention strategies.

Scholarships for MPH studies 2004/2005

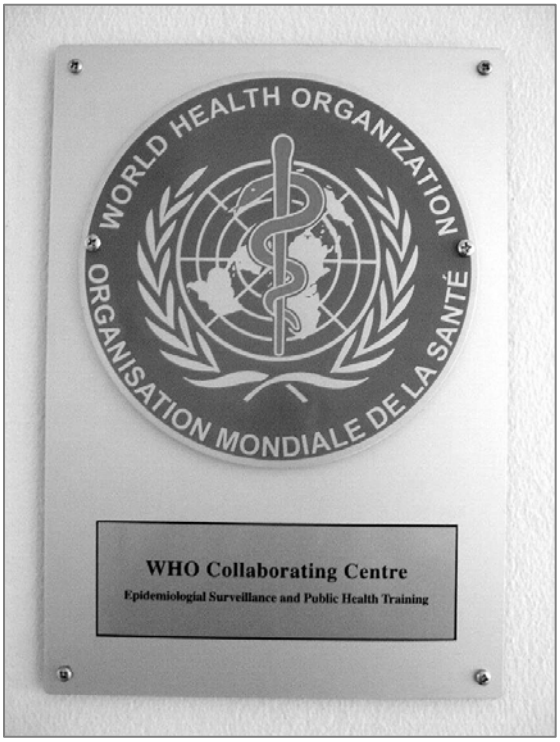
Since 1997, the *STINT foundation* (Swedish Foundation for International Cooperation in Research and Higher Education) has made a number of one-year MPH scholarships for study in Umeå available to students from certain countries in East Asia, South Africa and Latin America. The following six students are the current group of scholarship holders.

Molefe Titus Machaba, Dept of Medical Microbiology, Univ. of Cape Town, South Africa
Vathiswa Belinda Papu, Health Promotion, MRC, Cape Town, South Africa
Yandisa Msimelelo Sikweyiya, Gender & Health Group, MRC, South Africa
Ling Lei, Sudan University, Shanghai , China
Rahul Kalon, Uma Sanjeevani Hospital, Haryana, India
Nokuthula Ntombikayise Ngubane, Africa Centre for Health & Population Studies, South Africa

The Swedish Institute gave a scholarship to:
Tigist Worku Adugna, Addis Ababa, Etiophia

Two scholarships from *The County Council of Västerbotten* for students from the new EU countries were awarded to *Evija Dompalma*, Health Care Organization, Division Public Health Dept, Ministry of Health Latvia and to *Elina Pujate*, Public Health Agency Latvia.

WHO Collaborating Centre



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

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

Terms of reference include:

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

Umeå and I

Finally I want to say that I really don't regret that I chose to come here and I wish that everybody would receive such a nice surprise as I did!

Before I start to write about my life in Umeå, I should reveal some facts about my life before. Somehow everything in my life that is related to Public Health comes as a surprise. First of all, it was a sudden impulse to study Public Health after graduating from secondary school, and after four-years of demanding studies I got a Bachelor degree and started to work in the Public Health Department of the Ministry of Health. I was lucky to get that post and I had a unique opportunity to meet people from all over the world and participate in decision-making during Latvia's transition period from a post-Soviet country to a full-fledged European Union member state. I was at the beginning of a promising career but I felt that I wanted to know more about Public Health perspectives outside my country.

It was a sunny December day when I accidentally received a paper about the possibility to apply for a scholarship for Masters degree studies in Public Health at the Umeå International School of Public Health. I decided to try and completed all necessary forms. For some time there was no answer, so I forgot about it. And then I got a surprise again – I was granted a scholarship! I was so happy! It was only after some hours that I realised that this news would change my plans, at least for the next year. I would temporarily quit my job, leave my family and friends behind, and go to the north… Despite Latvia having similar weather to Sweden, the possibility to live for five months in darkness and surrounded by snow, was not enticing. As I had studied in Uppsala University, I knew what to expect.

I will not deny that the opportunity to study together with people from Africa and Asia was both exciting and a deterrent. Now these feelings seem silly, especially because I have met so many wonderful people and many of them will stay in my heart after returning home.

Umeå is an international student city – you can meet people from all around the world, especially if you do not sit in a room but take part in activities offered by the Department and the International Office. So, I could easily get to know about local events, such as music festivals, ice hockey games, horse racing, and I could travel to neighbouring countries together with other students as well. In addition, students often organize activities themselves and it is real fun to participate in national dinners, traditional dances and singing events.

Umeå is a possibility place – lecturers are professionals in their field and are ready to share their knowledge and experience that can inspire you for future projects and collaboration. Besides knowledge gained here, both studies and people have broadened my view and now I feel that I have something more to give to my country and society as a whole.

Umeå has a good environment for studying. It is calm and safe here; the university has an updated library and students can read journals free of charge. The university staff are always friendly and supporting. Furthermore, everyone is able to learn Swedish, German or English languages for free. I think it is a good opportunity and I proved that it is possible to merge studies at university, Swedish language in the evenings with social activities during a week. Besides when I felt stressed, the best solution was to visit IKSU. There, everyone can find suitable physical activities or just enjoy the jacuzzi.

Finally I want to say that I really don't regret that I chose to come here and I wish that everybody would receive such a nice surprise as I did!

Evija Dompalma, Latvia

Run-away groom

I had always wanted to advance my education from the time I started working after my first degree. Exposure in the work environment drove me to look for opportunities to improve my education because I always felt that there was much more I could contribute if only I knew more about what was going on. I have always worked in the health sector and I knew that there is much more involved with the health of people than just going to the hospital when they are sick, getting medication and going back home. I wanted to know what the whole picture looks like and what better way to do this than to study for a Masters in Public Health, the "MBA of health". So I started looking around for an MPH programme, that I thought would meet my needs. I searched in all the five continents and, well you guessed it, the University of Umeå, came out tops. The courses offered were just right and I could manage the finances with the help of my family, so all roads were leading to the north of Sweden, to Umeå. Only one problem, I was engaged to be married four days before I was scheduled to be in Umeå. How could I leave my new bride four days after our wedding day? How could I not only leave town, but the country when I was supposed to be starting a life with someone? I was very apprehensive and uncertain of what my next step should be. I spoke to my then fiancé, Monde, about it and she said 'there is no question about it, you are going to study for your MPH and that's that'. Then I went to speak to my parents and they said 'you should go son, it's a great opportunity'. So there I was, a desire to learn more, an opportunity to do just that and blessings from my whole family, what more could I ask for , I was ready to leave. I got married on the 14th of August 2004 and I left for Umeå on the 18th of that very month.

I arrived in Umeå on the 19th of August 2004 at 5 o'clock in the evening; I was met by a very pleasant and welcoming lady, by the name of Birgitta Aström. She took me to my residence, showed me around and later took me to do some shopping at the near by Alidhem Centrum, after which she bid me adieu .The next day I went to the department, where I met another lady , Karin Johansson, who was also part of the team that was going to look after us . That same day I had the privilege of meeting some of my course mates and I was amazed at the diversity of countries represented. I had truly come to an international school! I have never been in a class where all five continents are represented, but then there's always a first time and that was in Umeå for me. The following week was the orientation week and we had several activities lined up which included a bus tour of Umeå and that was the first time I really saw Umeå. The words "how pretty" came to mind. The town was so neat and it was summer then and the flowers were in full bloom and the river was "still flowing", how pretty! That week passed by very fast and later I came to realise that time moves quite fast here, I have been here close to six months now - wow!

The weeks that followed were lecture weeks. I was very impressed with the quality and style of teaching. The lecturers are true teachers as they always take the time to explain everything so that one gets to understand. Interaction in the classroom is encouraged here and one tends to learn a lot from this, as every class member is encouraged to share their thoughts on whatever subject matter is being discussed. In all the courses I have taken thus far, there is a lot of group work and I have benefited greatly from the experience of my classmates from their countries and professions in these exercises. Hats off to all the people involved in planning and implementing the study programs.

Living in Umeå has been a very pleasant experience for me. The people are friendly and always willing to help if you have a problem or just want to chat. I have made life long friends here and even though I miss home right now, I am sure when I go back the reverse will be true. Corridor life has been very interesting for me, as I have been able to learn about Sweden and its people and share things about my country as well. It took awhile before I got used to the weather here; coming from a tropical country it was quite a challenge. In Zambia when it's "cold", the temperatures are around eight degrees celsius, plus! When I arrived in Umeå I complained about how cold it was and I was told very encouragingly that "well, it actually gets colder than this, much colder", now I can even say "it's warm outside today", yes me, that even surprises me sometimes.

Umeå, will always have a special place in my heart not just because it's the place where I got my first masters but for so many reasons that I believe have made me a better citizen of the world. When I go back home, I can safely say that I took one for the team! I came, I saw and I conquered and it's all thanks to the Umeå International School of Public Health.

Busiku Hamainza
MPH student, Zambia

Becoming a PhD student at Epidemiology and Public Health Sciences

When I was a little girl, I had a dream of going to foreign countries and meeting people from foreign places. To me, places like Dar es Salaam and Addis Ababa, sounded exciting and interesting. When I was twelve I decided to become a nurse, to be able to fulfil my dream of going abroad. I "half" succeeded in my plan when I, as a first step, became an assistant nurse. However I was disappointed when I discovered that nursing didn't suit me at all!

Instead I ended up as a social worker, which I liked. As a social worker, I was particularly interested in preventive social work - to try to intervene in the social structures and the social environments to prevent social problems, instead of "treating" the single individual when getting social problems. After a couple of years as a clinical social worker, I got the opportunity to lecture for social work students, at the department of Social Welfare at Umeå University. I enjoyed teaching, and the environment at the University. I felt that the academic environment made it possible to channel curiosity and creativity through work. For that reason I decided to go into research. I still had a dream of combining my professional work with an international engagement, but by this time I thought that I had come too far away from my "childhood dream". However, sometimes, life gives us pleasant and unexpected possibilities. By a coincidence, at a course for university teachers, I met a researcher from the department of Epidemiology and Public Health Sciences. I got information about the interesting research projects at the department, and one year later I was invited to become a research assistant in the project called "Urban Design". Suddenly I saw myself at one of Umeå´s most international workplaces! My new workplace gave me colleagues from many of the "exciting" places I dreamt of as a child. For the first time in my professional life, I felt that I had come "home" – I had found a place where I could see myself working for the rest of my life. After two years at the department, I have now begun my "PhD-journey". The topic for my thesis is "social capital and health interventions" – a topic that greatly connects to my interests as a social worker as well. I felt privileged to be able to do my PhD at a department where "team-work" is really practised – this gives me important support in the research process. For quite a long time now, I have felt comfortable to be in the beginning of my PhD work - writing articles have felt far away… But now I am starting to think that it is all a matter of taking it "one step at a time". A PhD-thesis feels unattainable in the beginning, but taking it one step at a time makes it more achievable. Coming up with a PhD-plan, collecting data, starting to analyse data – suddenly you realize that you are "on the way". Probably even writing articles will feel natural, when "the time" (and data!) is ready! Hopefully it will be the same when it comes to finishing a PhD-thesis in the future – when "the time" is ready, it will be finished. (Probably those who recently finished their PhD will disagree now and say – NO it never feels ready, but we are forced to finish it sometime! Ok – maybe some elements of push are needed too in the PhD-process, that's why we have supervisors!)

Malin Eriksson

My thesis journey

Through my family I was "programmed" into the field of social work. When I came to Umeå, in 1977, it was difficult to find a job as a social worker and I decided quite happily to re-orient myself. After a short period caring for the elderly I got a job in the University Library. I learned to care for books instead of people. However, my "social librarian" dream faded away and administration took over in combination with maternity leave. In 1982 an administrative post was advertised at the Medical Faculty and I decided to try something new. MEDIFO was a national project for computerising and handling medical information. I entered a new world, both professionally and academically and learned typewriting the old way and computer handling the new. I was also taught the ropes of epidemiological methods. When MEDIFO was merged into a new department I had the chance to be part of an organic growth, starting with a few devoted researchers and administrators. It was a challenge to start administrating epidemiological research both in Sweden and developing countries in areas such as evaluation of cardiovascular disease prevention in Northern Sweden, primary health care in Somalia and epidemiology of HIV/AIDS in Tanzania. My qualifications in social work were useful and my experience of "social interventions" relevant. I joined the evaluation of the Norsjö programme, interviewing actors about views on community participation. Still, I hesitated to enter the field of research. I had seen both the pros and cons of the commitment needed to be a good teacher and researcher. But gradually, curiosity took over. I studied qualitative methodology and medical sociology and was granted a stipend to look at stigma and HIV/AIDS in Kagera, Tanzania. When an HIV intervention trial was planned, I wrote a study proposal and was lucky to be granted a PhD post. I wanted to compare the experiences from the cardiovascular prevention programme in northern Sweden with the intervention activities suggested for preventing HIV/AIDS in Tanzania. Both interventions targeted behavioural change in rural community settings. Due to financial constraints the intervention in Kagera did not materialise but the epidemiological surveillance of the epidemic as well as sub-studies on social and linguistic aspects were supported. I gained field experience, interviewing competence and data handling skills. Within the evaluation of the cardiovascular intervention in Sweden I gradually decided to focus on ethical issues and on the role of self-rated health in public health evaluation. Slowly I accepted excluding the Kagera studies from the thesis and decided to re-orient and broaden my research training to include more quantitative methodology.

The dynamic development of the Department also gave opportunities to teach within the Master of Public Health programme. Together with good mentors I came to love it. We developed a computer programme for handling qualitative information (OpenCode) and started to write a book on qualitative methodology for public health. When asked to contribute in qualitative studies in Ethiopia and South Africa I took the chance, as I did when offered to work as a consultant at Sida/SAREC and when later given the possibility of being the Managing Editor of Scandinavian Journal of Public Health.

My thesis discusses manifest and latent functions of community interventions. It emphasises the connection between norms and feelings in decisions to act. The main manifest outcome of PhD training is the final thesis. It took me ten years to accomplish that goal. From an academic career point of view I may have lost some years. Not having "a licence" sometimes made me feel a failure. However, the latent functions of a "delayed" doctoral training have been more rewarding. My engagement with the Tanzanian and Ethiopian collaborations gave me second homes and rich experiences. Teaching and tutoring master students gave me appreciation and confidence. The journal work gave me recognition for managing skills in scientific publishing. For me it was definitely "the journey that made the thesis possible".

Now, when the thesis has been defended, I feel privileged to have the opportunity to continue the teaching, research and journal work that I have been part of developing. I also look forward to the challenge of being a supervisor of new doctoral students. My experiences will hopefully help them not to be too narrow-minded and focussed on the final outcome. I will be proud if I can contribute to making them feel seen, confirmed and involved during their research journey.

Maria Emmelin

1. Institutional setting

Organisation

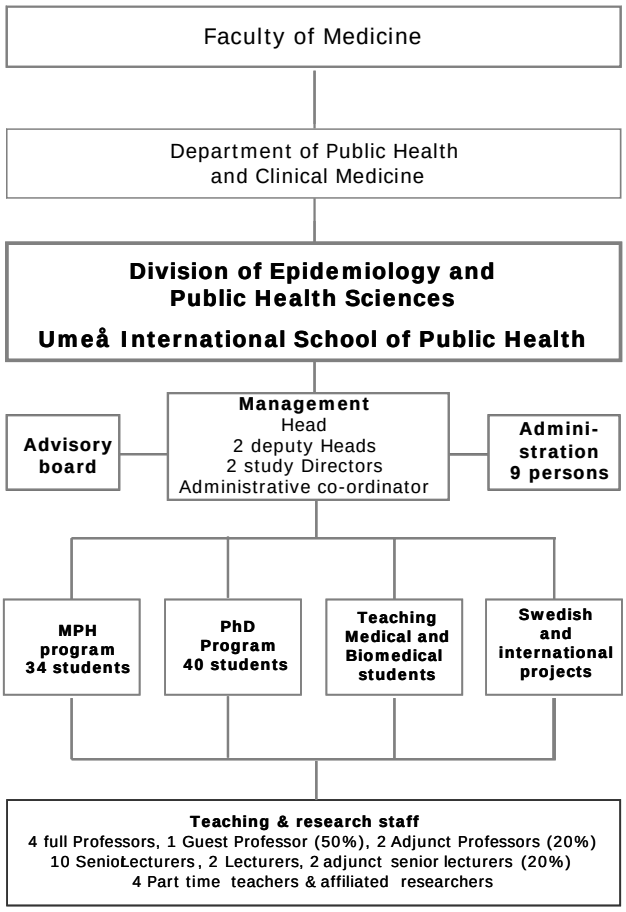


Figure 1. Organisational chart of division within department and faculty

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

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

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

Staff development

At present 63 research and administrative posts are attached to our division, including international and doctoral students employed or associated with other departments. Of these, 40 are women (63%). Of the 7 professors, including up-graded and adjunct, as well as affiliated professors, 1 is

female. Of 18 teachers/researchers employed as senior lecturers, adjunct senior lecturers or lecturers, 7 are women. Of 19 Swedish PhD students currently registered or about to be registered, 12 are women and among 12 international PhD students, 5 are women. Six out of 7 administrators are women.

Of the 36 students who have completed their PhD during 1987-2004, 17 were women. Twenty-one of these were Swedes, 11 of which were women. Of the 19 students who have finished their PhD since 2000, 11 were women.

During 2000-2004, 30 students were admitted for PhD studies, 15 of which were women. The gender balance is illustrated in Figure 2 below.

When considering the female:male ratio of 40:60, which in Sweden is defined as a gender balanced work organisation, we can conclude that in general we have obtained a gender balance among the staff. The groups that still have a gender imbalance are mainly professors/researchers with a majority being men, and administrators where most employees are women.

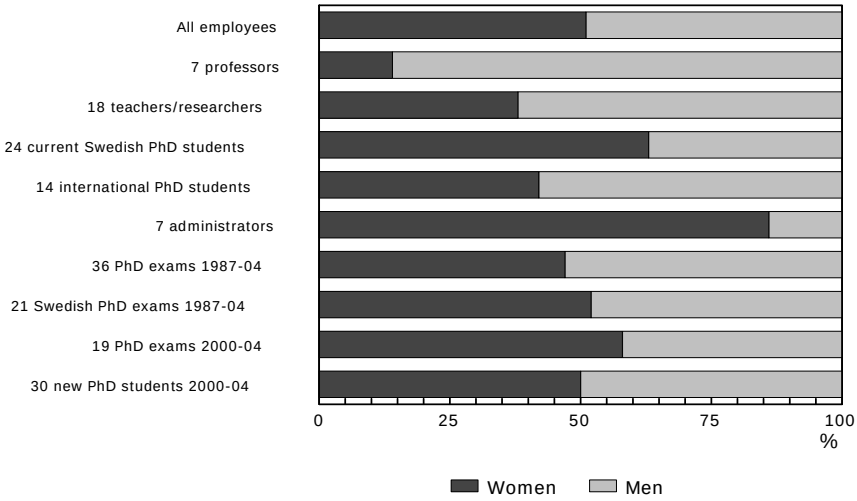


Figure 2. The sex distribution among all 63 staff members employed at or associated with our academic environment by subcategory in 2004.

In all, 40 doctoral students (Table 5, p 59) are registered (2004) with our research programme or receive major tutorial with us. Sixteen of the research students' group are physicians, and the others represent a mix of sociologists, economists, social workers, dentists, environmentalists, physiotherapists and nutritionists. The 23 post-doc personnel represent environmental, paediatric, reproductive, nutritional and oral health but also medical sociology, statistics and health economics. In terms of person-months of work at the division we have reached a "steady state" corresponding to about 35 full-time staff; 26 31 and 43% accounted for by administrative, pre-doc and post-doc staff respectively (Figure 3).

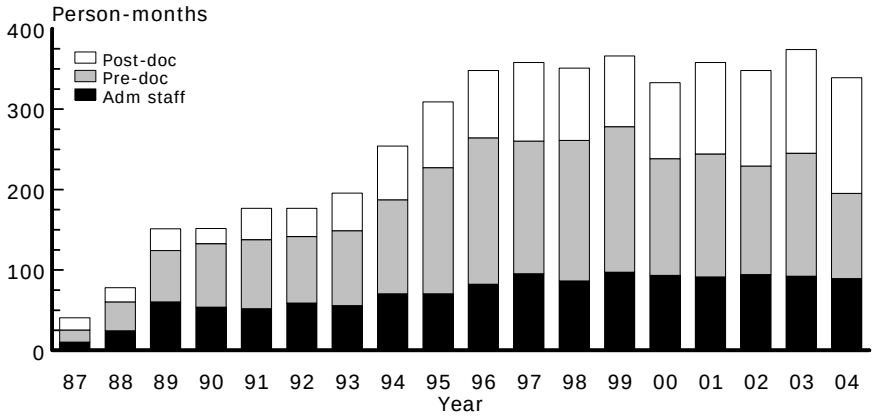


Figure 3. Development of person-months at work by staff category 1987-2004.

Budget

The total budget (Figure 4) for the year 2004 amounted to SEK 25.7 million, 69 % of which consisted of external Swedish research grants or grants for bilateral development research projects (Figure 5).

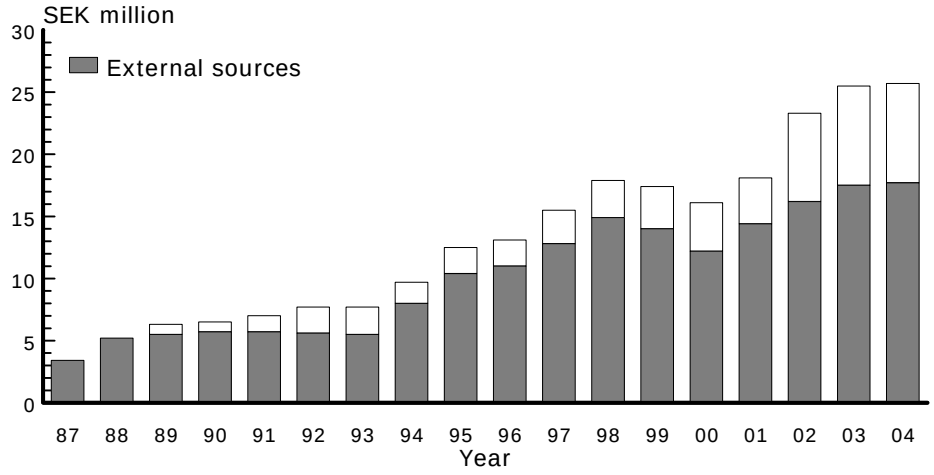


Figure 4. Development of total budget 1987-2004

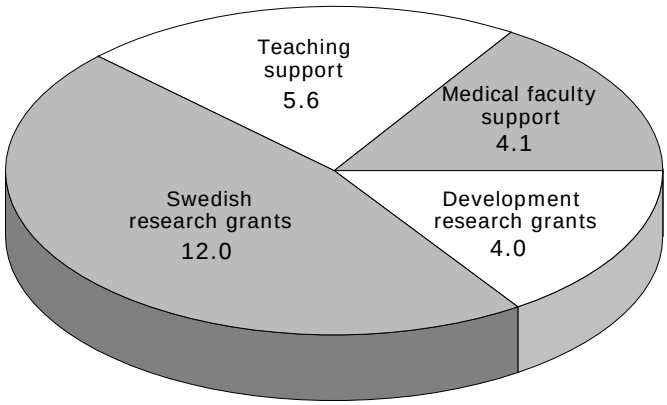


Figure 5. Financial sources for the fiscal year 2004 (in SEK millions).

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 4.1 million. The teaching support, and the associated responsibilities, have increased from 0.6 to the present 5.6 million SEK. The latter is mainly a consequence of the expansion of the public health teaching to the complete international MPH programme and our increasing involvement in the medical undergraduate programme (see also p. 59). The balance between Swedish and development research, see Table 1, has shifted to about 70:30 lately due to long-term programme support from the FHI, National Public Health Institute and FAS, the Swedish Council for Working Life and Social Research. Other funds are supplied through project grants from Sida/SAREC, FAS, EU and the Vårdal Foundation. The project grants are further specified in Table 1.

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

The output side of the budget is shown in Figure 6 by type of expenditure. Thus, almost half is accounted for by salaries and 12% by the operating budget. It should be noted that the overhead support to the university administration was SEK 1.58 million during 2004.

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.

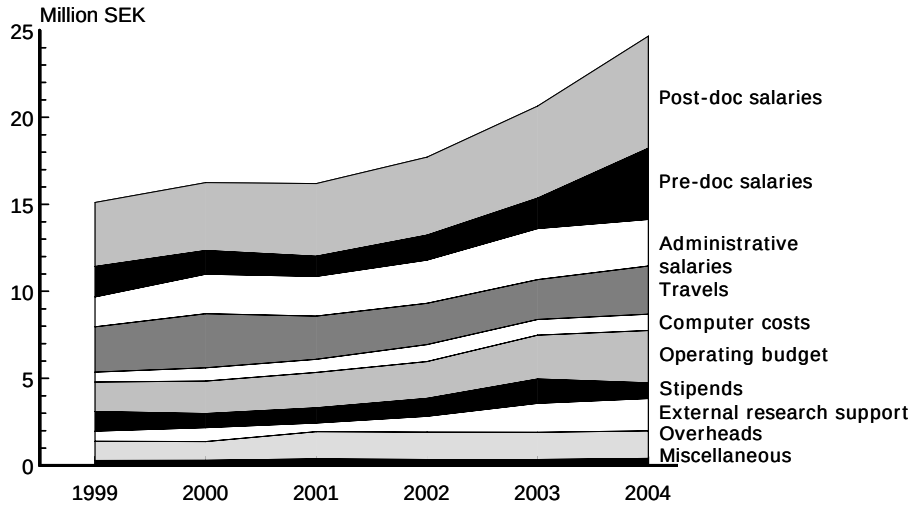


Figure 6. Budget development 1999-2004.

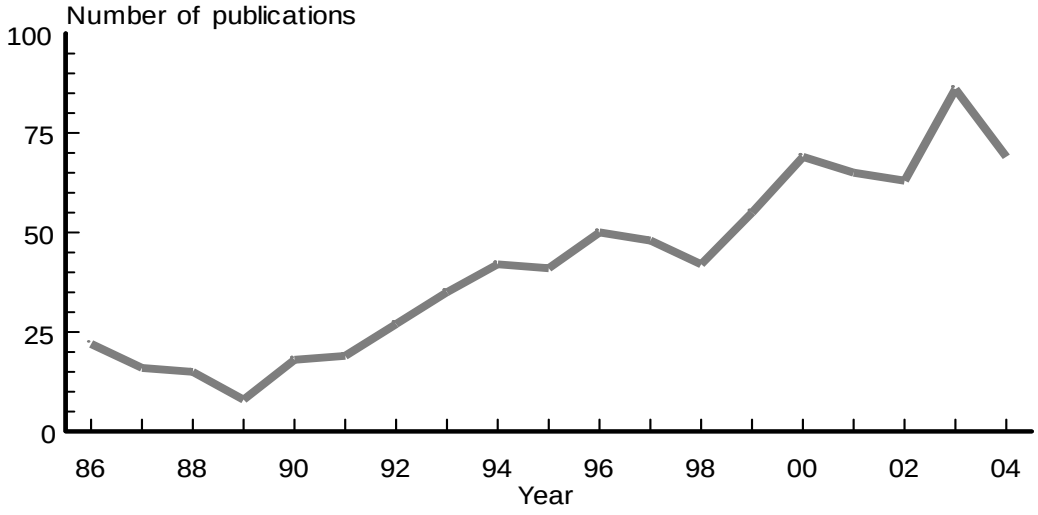


Figure 7. International publications in peer reviewed journals from our unit 1986-2004.

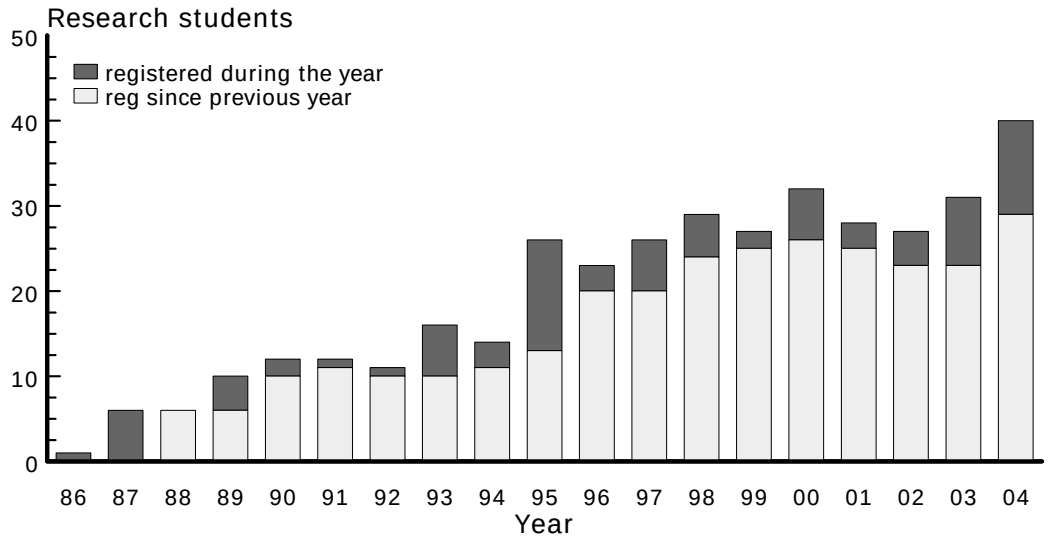


Figure 8. Research students at the division 1986-2004.

Figure 8 shows the number of research students over time, one of the parameters for the budget model assessment system. During 2004, 40 pre-doc personnel were associated with our department, 11 of which were registered during the year. A total of SEK 11.7 million is thus channelled to the departments as a bonus; we acquire 7.4 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 16 years that we have existed as an independent research environment.

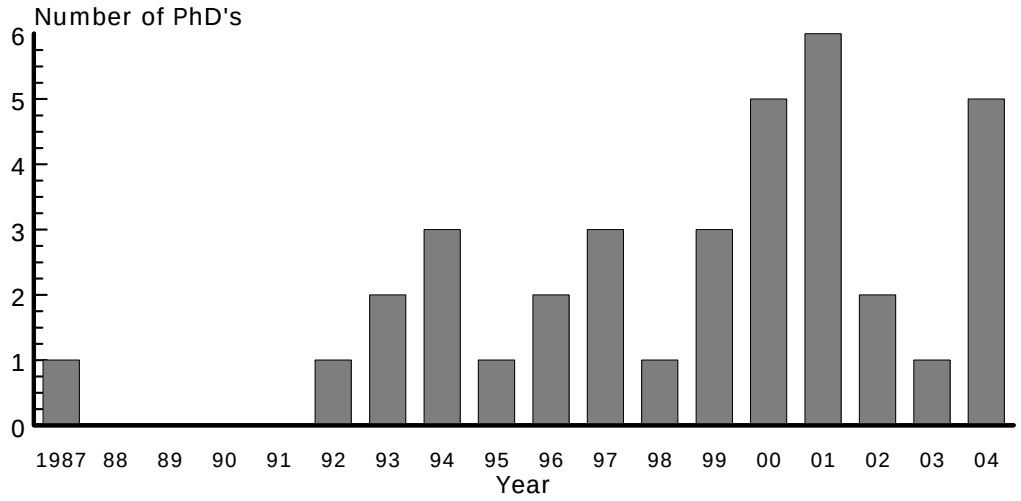


Figure 9. Doctoral dissertations 1987-2004.

Table 1. Project grants for 2004.

Funding source	Title of project/programme	SEK
FAS	Epidemiology for public health interventions – program support	1 300 000
	Guest researcher: Health Information System – methodological development for international epidemiology and PhD training	100 000
	The epidemiological transition in three developing societies from a Swedish perspective	800 000
	Scandinavian Journal of Public Health (support for Editorial Board)	200 000
	Creative competition or hampering hierarchy? Academic working conditions from the viewpoint of doctoral students	520 000
	Can public health be improved by strengthening the social capital?	500 000
	Is low food intake of folic acid a risk factor for CVD? – an epidemiological study in the north of Sweden.	520 000
	The impact of food intake for public health in the north of Sweden – A population based cohort study since 1985.	200 000
Sida/SAREC	Butajira health in transition study, Ethiopia	700 000
	Information for understanding and managing health transition, South Africa	150 000
	Reproductive and child health – Nicaragua	316 600
	TANSWED HIV programme in Tanzania	263 000
	Health Systems research, Vietnam	700 000
	Reproductive health in Tanzania	218 780
	Knowledge and perception of risks during pregnancy – Qualitative and quantitative studies - Vietnam	75 000
	Research and teaching development in reproductive health and domestic violence – guest researchers plan – Y Berhane	300 000
	Epidemiology for Public Health Intervention – program support	200 000
	Domestic violence, in urban and rural Indonesia –coping strategies and community support	75 000
EU	Evaluation of effectiveness of breast cancer screening with mammography	436 359
County Council	Senior lecturer in health economics (part-time)	202 500
	Smoking habits among middle aged people in Västerbotten county	100 000
	Economic evaluation of the Holmsund intervention project	100 000
	Senior lecturer in epidemiology	842 500
	Senior lecturer in health care research (half-time)	438 750
	Health promotion from a professional perspective	100 000
	Health care and its contributions to a developed public health	1 350 000
	Database for Västerbotten Intervention Programme	367 969
FHI	Collaboration between National Institute of Public Health and Epidemiology and Public Health Sciences, Umeå university	2 123 940
	Health economic evaluation of health promoting visits to elderly in the community	659 478
Vårdalstiftelsen	Do priorities in health care vary by ethical, societal or economic preferences?	600 000
Taylor&Francis	Support for the editorial office of Scandinavian Journal of Public Health	165 000
Miscellaneous		1 421 733
TOTAL		**16 046 609**

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

Funding source	Title of programme	SEK
Medical faculty	Master of Public Health Programme: - Public health, 10 points - Epidemiology, 10 points - Biostatistics, 10 points - Medical sociology, 10 points - Qualitative methods, 10 points - Evaluation methods in community intervention, 5 points - Nutritional epidemiology, 5 points - Hälsoekonomisk utvärdering, 5 poäng (in Swedish) - MPH thesis, 20 points	2 037 000
	Basic support	200 000
	International summer course in Epidemiology and field research methods	128 000
	Alkohol, droger och samhälle	114 000
	Research methodology, 5 points	130 000
	Advanced biostatistics, 5 points	35 000
	Biomedicinsk grundutbildning, 5 poäng (in Swedish)	165 000
	Läkarutbildning	1 073 000
Sida/SAREC	International summer course in Epidemiology and field research methods	470 000
STINT	Scholarship for the MPH programme	622 500
Sida	Minor Field Studies (MFS)	169 000
East-European Committee	Scholarships	117 000
County council	Scholarships for MPH studies	165 000
	Scholarships for PhD studies	150 000
Total		**5 575 500**

Special events during 2004

The installation of new doctors at Umeå University in June 2004

Department days in Vindeln, October 2004

Klas-Göran Sahlén won the Audience Prize with his poster on the 17th Nordic Gerontology Congress in Stockholm 2004

The PhD scholarship at Umeå International School of Public Health, granted by the Västerbotten County Council, was this year shared between Fatwa Sari Tetra Dewi from Indonesia and Leoni Dapi Nzefa from Cameroon.

School class from Carlshöjdsskolan

All staff and students were invited to the traditional
Lucia coffee and the Christmas lunch

Staff

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

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

Ann Öhman. PhD, physiotherapist, senior lecturer. Deputy Head of Division. Research on social epidemiology (work, stress and chronic pain from a gender perspective). Coordinator of gender equality at The Faculty of Medicine, Umeå University.

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

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

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

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

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

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

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

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

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

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

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

Malin Eriksson. Social worker, Master of Social Science. Doctoral studies on “Social Capital and Health Interventions – prerequisites, barriers and prospects”.

Stephen Goldin. Physician. Doctoral studies on refugee children from Bosnia-Herzegovina. Also attached to Child and Adolescent Psychiatry.

Kerstin Hultén. Dietician, Master of Public Health. Doctoral studies on breast cancer and nutrition among women in Västerbotten. Licentiate seminar in November 2001. Also attached to the Unit of Nutritional Research.

Anna-Karin Hurtig. MD, DTM&H, PhD. Lecturer in epidemiology and 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 and head of the Epidemiology unit at the Västra Götaland Regional Board of Health.

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

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

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

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

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

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

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

Ingrid Mogren. MD, PhD, 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. IT-responsible at the department of Public Health and Clinical Medicine.

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

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

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

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

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

Jerzy Pilch. Project administrative assistant. Involved in projects on diabetes epidemiology and violence against women in Liberia. Responsible for computer network and maintenance at the department.

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

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

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

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

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

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

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

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

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

Birgitta Åström. Administrator in research and education. Project administrator for the research and teaching exchange programme with Indonesia. Guest student co-ordinator. Responsible for STINT-scholarship students and MFS-students. Course administrator for research courses. Representative for the working environment at the department.

2. Highlights of some of our recent and future research

An important characteristic of our research and teaching activities is a global health perspective. This means an attempt to approach public health issues locally and nationally in Sweden as well as in international collaborative projects in Africa, Asia or Central America. Our epidemiological methods are universal despite the different contexts. Most research teams in research projects have included a mix of competencies, which is also reflected in the different research methodologies employed. Studies of HIV/AIDS in Africa, of sexual and reproductive health in Africa and Central America and of community interventions in northern Sweden have been performed by use of epidemiology, qualitative methods, application of health economy etc.

One major challenge to a global understanding of public health is the continuing disparity in sources of health information between richer and poorer settings. Scandinavia is well known for its long-standing individual registration, yielding data that can be a powerful tool for public health. At the other extreme, many countries (particularly in sub-Saharan Africa) still have no routine system for collecting even basic birth and death data on a population basis. Thus crucial data are often unavailable, or based on unrepresentative urban health facility settings.

Thus we have been closely involved with the development of *epidemiological field laboratories* that can provide insight into the health of otherwise undocumented communities. Our specific collaborations in this respect include work in Ethiopia, Vietnam, Indonesia, Nicaragua and South Africa, as well as being involved from its foundation with the Indepth network, an international network of demographic field sites, currently with 34 member sites in 19 countries. This creates exciting new opportunities for sharing and exchanging health data between some of the world's poorest countries, as well as a platform for developing strategic and methodological issues.

Hence some important public health problems can be addressed. *The epidemiological transition* can be studied since the host countries are in different development stages. They also represent different health care systems which all have a great potential for improvement in the provision of health care more efficiently, accessibly and fairly. The field laboratories are ideal environments for small-scale trials and evaluations of health care reforms and public health measures.

Methodologically, the *combination of quantitative*, large- scale surveillance analyses and in-depth, *qualitative research*, is another significant characteristic of our work. This may be exemplified by projects on domestic violence in Nicaragua and on HIV in Tanzania. Both started from population-based studies on prevalence and risk factors. In-depth interviews and focus groups were then used to help understand how women coped with domestic violence and how villagers interpreted and lived amidst the HIV epidemic. The knowledge derived from the projects was enhanced by combining the two research approaches.

In national and international collaborations we have contributed to public health theory development and to the *dissemination into public health* practice. Our health economics research has demonstrated that the public is more sensitive to inequalities than health economists generally have believed. The research on domestic violence in Nicaragua formed the basis for a new law in the country and was also instrumental for the area now being on the public health research agenda. Studies on celiac disease have actively promoted revision of the national guidelines on breastfeeding and dietary advice regarding infants, which is suggested to have reduced the incidence of celiac disease in Sweden. This research programme has also contributed to the shift from a deterministic approach to a more multifactorial view on celiac disease in the research community, fostering prevention initiatives. We have coordinated the overview of the Swedish randomised trials on mammography screening. Results formed the basis for the European Guidelines and the evaluation of the Swedish service mammography screening programme constitutes a model for evaluating regional as well as national programmes.

Research on CVD *community interventions* has suggested that an active primary health care provider is a significant partner of the preventive structure. A number of PhD theses focusing on the Norsjö intervention illustrate that when the primary health care provider collaborates with other components in the local community, the preventive programme also potentially reaches lower educated groups at higher risks. This outcome is, as far as we know, one of the few demonstrations of a narrow-

ing health gap between privileged and non-privileged social groups. The Norsjö programme was implemented across Västerbotten and more than 70,000 middle-aged men and women have participated in the Västerbotten Intervention Programme (VIP). Today VIP is an integrated part of the county primary health care services.

An integral component of the development of the international collaborations has been the *International Public Health training*, starting from the training courses and workshops that made a springboard for the research. What started as short courses in epidemiological method has grown into the now International School of Public Health, taught in English and with major recruitment from abroad.

Umeå International School of Public Health and its MPH and PhD programmes constitute an infrastructure and lever for public health research collaboration, for comparative and implementation research in an increasing number of the third world countries, specifically through our coordinating role in Indepth.

The above forms the background and rationale for our recent designation as a *WHO Collaborating Centre.* It also results from longstanding collaborations and informal links with different branches in WHO, especially with its Department of Non-Communicable Diseases, as part of the MONICA study and in our capacity as temporary advisors and members of various task forces and priority committees.

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

In order to develop not only medical care but also the preventive work the County Council of Västerbotten has entered into an agreement with the Medical Faculty at Umeå University. This collaboration includes three senior posts at our division:

- A professorship in public health with focus on community health
- A senior lecturer in health care research with a focus on preventive methods and health promotion.
- A senior lecturer in epidemiology with focus on the health of youths and children

The County Council has also offered three doctoral posts: one on health economics, another on preventive methods and a third on public health work.

The long-term goal of our research programme, which tries to capitalize on the above milieu, is to *contribute to theoretical and methodological development* of the results and cost-effectiveness of public health interventions as well as their ethical and social consequences. Specifically we want to

- analyse the effects of socio-economic and environmental changes on illness and mortality
- contribute to the ethical platform of public health work
- develop and validate process-oriented alternatives to RCT for use in public health work
- analyse the social consequences of community oriented interventions, their potential use and harm
- develop the health economic analysis of assessing health equity
- assess the role of health care in health promotion and community interventions

A major global health challenge, in addition to the HIV trauma, is to counteract *the emerging epidemic of non-communicable diseases in low-income countries.* Decades of research have suggested how to reduce their burden, but most information on lifestyle-related risk factors still comes from western countries. The challenge for the health services of a country with the dual burden of diseases is to complete the unfinished task of managing the diseases of poverty while simultaneously initiating prevention and cost-effective care. Even if NCDs are still relatively rare in the poorest communities, it would be a great mistake not to protect the coming generation from the known and well established risks. It would also be a methodological mistake not to be prepared to follow and influence the presumed rise of the NCD epidemic.

We will explore the driving forces behind and consequences of the emerging epidemic of chronic diseases in disadvantaged communities by contrasting the changes in social and risk factor patterning and disease occurrence in rapidly changing societies with those in a community with a rapid decline in cardiovascular mortality (northern Sweden) and by

reference to the historical evidence. Specifically we want to

- validate and implement a model of surveillance specifically to assess NCD risk factor occurrence
- assess NCD risk factor levels and trends and review the socio-economic and cultural changes in data-poor countries at different stages of the epidemiological transition
- assess mortality by cause of death through the validation and implementation of methods for verbal autopsy, specifically seeking to estimate the impact of NCD
- analyse the historical and current situation in Sweden to better understand and predict current trends in transitional societies
- develop common methodologies and to contribute to the theoretical modelling of the modern phases of the epidemiological transition.

Our ambition is to foster and sustain our international research and teaching environment. While using modern epidemiological strategies as well as qualitative approaches we retain a social and distributional perspective on health. This means that our international collaborative projects focus poverty related public health issues, e.g. reproductive health and the health transition and that Swedish research addresses inequality in health and the impact of prevention in different social strata. Analytical categories of importance in this regard are social class, gender, ethnicity, culture and age.

The study bases in the Swedish research are often national or regional registers and longitudinal cohort and case-referent studies while in environments lacking this infrastructure study bases are created through actual fieldwork in so called population laboratories. Research training is integral to these collaborations and when doctoral students can be recruited on both sides, potentials for much interdisciplinary and cross-cultural work emerge.

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

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

The first problem area

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

The second problem area

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

The third problem area

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

Etiological studies

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

Sexual and reproductive health

Two generational analyses

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

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

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

Pelvic pain during and after pregnancy

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

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

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

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

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

Gender power dynamics

Qualitative studies in Southeast Zimbabwe explored perspectives of men on women's sexual and reproductive health. In focus groups, men described how they view abortion and contraceptive use. Women confirmed that their husbands reacted violently if they discover contraceptives secretly. This scenario results in what is called "hide and seek", where men search for evidence of contraceptive use on one hand, and their wives use the contraceptives on the other. Schoolboys' and schoolgirls' perspectives on sexual and reproductive health were studied through self-generated questions and statements. Their perspectives included fears and conflict of emotions, and feelings in sexuality and premarital pregnancy within contexts of prohibition and silence. Jeremiah Chikovore defended his PhD thesis in March 2004 (p. 1 and p. 67).

Chronic diseases in children and adults

Health in childhood and adolescence

Today there is substantial evidence to support the hypothesis that the atherosclerotic process leading to cardiovascular diseases (CVD) starts in childhood. Several international studies are trying to describe *CVD risk factors* in childhood and adolescence. The Umeå Youth Study, which started in 1989, is the first major Swedish study

on this subject. The study is a prospective cohort study, using questionnaires, diaries, clinical and biochemical examinations, physiological tests, and medical registries. The study population comprises around 1000 adolescents in two age-groups, 14- and 17-years old, in the municipality of Umeå. In 1999 a 10-year follow-up of the initial study was performed when the subjects of the study were 22 and 25 years respectively. The main focus of interest in this study is to follow the development of the CVD risk indicators, to describe if dietary habits, physical activity and tobacco use have changed when the adolescents have left home to live on their own and to explore the social stratification of the CVD risk indicators.

Obesity and pain symptoms may be regarded as "*new morbidities*" in modern society and are becoming increasingly prevalent in adults and teenagers, however we know little about these health problems among younger schoolchildren. In an epidemiological study among 6-13 year old children in Umeå we found that the proportion of children classified as overweight was 23% (doubled in 15 years). The prevalence of pain symptoms (headache, stomach-ache, backache at least once a week) was also 23%. In an ongoing study on mental health among children 9 and 12 years of age, the relationship between mental health on the one side and overweight and pain symptoms on the other will be explored further.

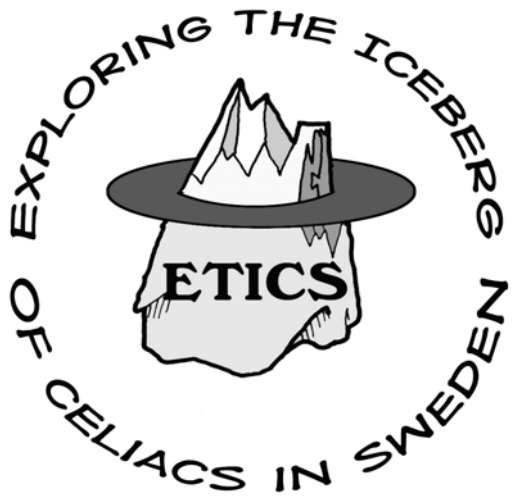
Nickel allergy is a common cause of hand eczema. Ear piercing usually induces this allergy. Preliminary findings indicate that straightening irregular teeth with metal braces containing nickel may prevent the induction of nickel allergy. A case-referent study of nickel-sensitised teenagers and referents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

Celiac disease – a public health problem

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

We are responsible for a national incidence register of celiac disease in Swedish children, which has revealed an epidemic of celiac disease. 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 [121, 119]. In the international research community these findings have promoted a changed view on the etiology of celiac disease from deterministic to multifactorial [122, 123], thus fostering prevention initiatives.

Screening and diagnosis of celiac disease is facilitated by serological markers. Based on the multi-centre case-referent study we now evaluate the most promising serological markers, also considering the potential role of humane leukocyte antigen typing. We have also participated in a European collaborative study, suggesting revised diagnostic criteria for celiac disease [13].



Design: Erik Sandberg

In all populations approached for celiac disease screening it has become evident that a considerable part of the cases are unrecognized, however these are to a varying extent. Therefore the public health burden of celiac disease is often illustrated by an iceberg where the visible tip represents people with diagnosed disease, and the part hidden below the waterline are those so far undiagnosed. Now a Swedish multi-centre screening programme for celiac disease will be performed, i.e. ETICS – exploring the iceberg of celiacs in Sweden (figure). Included are 12-year old children born during the epidemic and post-

epidemic years, respectively, to compare the prevalence in these cohorts both of symptomatic and so-called "silent" disease. This will further clarify whether primary prevention of celiac disease is possible, and whether mass screening for early detection and treatment is justifiable [127].

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

The treatment of choice for celiac disease, i.e. a gluten free diet, might be a nutritional hazard. Therefore we plan a study in children and adolescents on food choices, nutrient intake and nutrient status, also approaching social consequences of the disease and the diet.

Moreover, we actively take part in promoting a European platform for research on prevention and treatment of celiac disease by integrating basic scientific knowledge in clinical applications and the food industry.

Nationwide diabetes registration

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

In 1983 a similar nation-wide register on diabetes for the age group 15-34 years was initiated – the Diabetes Incidence Study in Sweden (DISS). New cases of type 1 and type 2 diabetes, and secondary diabetes mellitus as well as unclassified types of diabetes are reported by all paediatric, medical and endocrinological departments and public health centres in the country. Up to December 2003 7,900 cases (approximately 400/year) had been reported, of which 73% have been type 1 diabetes, 17% type 2 diabetes, 1.3% secondary diabetes and the remaining 9.1% unclassified.

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

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

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

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

The occupational and living environment

Sick building syndrome

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

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

Continuing research in this area is focusing on *chemical risk factors of SBS symptoms* and on the natural history of SBS symptoms and VDT related skin symptoms. A new project focusing on chemical exposure was recently initiated. In order

to get information for the planning of a new case-referent study, a pre-study was conducted to find the variability in chemical exposure in office workers. The results showed that for most chemicals, the variability is greater between persons than among buildings and that men and women have different exposure patterns. The case-referent study is ongoing and performed in collaboration with The Swedish Polytechnic, Vasa, Finland.

With the aim of developing better care and action programmes for patients with the above types of "environmental illnesses" our studies are focusing on personal, psychosocial and environmental prognostic factors. For comparison, a similar follow-up study of patients with a well-recognised environmental illness, hand eczema, has been undertaken. Follow-up results from patients with "hypersensitivity to electricity" have shown that there is a large subgroup of patients with "VDT-related skin symptoms" and with quite normal findings concerning self-image and coping resources. The medical and social prognosis in this group is favorable in comparison with a smaller subgroup of patients with perceived "hypersensitivity to electricity". This subgroup has a larger number of symptoms that they attribute to electricity in general. In particular women in this group have deviant findings in self-image and coping resources [7].

Indoor pollution in Ethiopia

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

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

Promoting development? International trade, oil exploitation and health

The effects of trade agreements on social and health conditions are increasingly discussed and debated as a result of an accelerated economic globalization. Regional agreements such as the NAFTA (North American Free Trade Agreement) have shown important effects on the welfare of the populations of those countries. The proposed "Free Trade Area of the Americas" (FTAA) might also have severe consequences for the well being of people in the region [84].

However trade and dependency between continents are not an entirely new phenomena. During the last 100 years, for instance, the developed world has been built around the applications of crude oil. The dependence on this natural resource has led to climate changes and destruction of fragile ecosystems.

Oil is a major source of income for Ecuador and has, since the 1970s, been the engine of the economy. Most of the oil comes from the northeastern part of the country, the Amazon basin. Since the beginning of oil exploitation, foreign and national oil companies have extracted more than two billion barrels of crude oil from this region. In this

development process, billions of gallons of untreated wastes, gas and crude oil have been released into the environment.

Environmental impact of an oil spill
in the Amazon basin of Ecuador

In the last few years, research has been conducted to assess the potential health impact of oil pollution in communities living near oil fields. Local organisations have set the agenda of the research: they have been involved in the hypothesis formulation, consulted in each step during the study and responsible for the dissemination of the findings. This process is known as popular epidemiology [83]. Results from these studies show that women living in exposed communities have higher rates of physical symptoms and spontaneous abortions than women in control areas. Recently, a significantly higher incidence of all cancer sites combined has been documented in both men and women in counties where oil exploitation has been ongoing for at least 20 years. An increase in haematopoietic cancers has been observed in children [28]. To prevent further negative environmental and health impacts from oil development in the Amazon region of Ecuador and other developing countries, specific interventions have been proposed [82].

In 1993 a lawsuit was filed against one of the oil companies (Texaco), which had worked for more than 20 years in the area. About 30,000 indigenous people and peasants claimed that the oil company had caused irreparable damage to the rain forest. During the trial, initiated in Ecuador in October 2003, the above studies were presented.

In the same region, an ongoing collaboration with primary health programmes has led to community based studies on nutritional status of indigenous children under five [10] and pattern of cancer among indigenous and non-indigenous groups [85].

A surveillance site in Nicaragua

The Nicaraguan society is severely affected by migration within, out of and back to the country., This is because of the severe unemployment situation due to the poverty and exploitation the country suffers. The migration is especially severe during some periods of the year when the now almost globally cultivated cash crops are harvested and the subsistence produce runs out (January until rainy season, usually May). Starvation is then a fact for the majority of the population. For this reason one or more family members need to seek work outside their home and usually in neighboring countries or the major cities.

The scope of the demographic and health surveillance survey set up by *The Centre for Demographic and Health Research (CIDS) in León, Nicaragua* is to estimate the effects of these disruptions to families' subsistence and the health consequences that follow. Such health problems are found in reproductive and sexual health. Malnourishment, stunting, and starvation in children are problems also dealt with. Another area found to be severely affected by the poverty situation are the mental health problems that follow, not least among children, but adolescents and adults as well (substance abuse, violence and crime).

The centre is run by researchers with training from our department in Umeå and is a result of more than ten years of collaboration financed by Siad/SAREC. The overall objective for the bilateral project "Demographic and Health Research" has been and still is, to create a sustainable group of researchers at the Medical Faculty in León. The research has been etiological but we are now moving towards intervention studies combined with research training at different levels.

Work shop, León, Nicaragua, January 2005

In January 2005 a workshop was held as a kick-off for the new funding period 2004-8. Researchers and research students formulated research plans for different research groups and above we see group work and presentation of the final plans.

Swedish doctoral students´ experiences

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

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

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

An important factor for successful studies is the relationship between the doctoral student and his/her supervisor. Within the project a quantitative as well as a qualitative study, comprising doctoral students as well as supervisors at Umeå University, was carried out. The study shows at the same time as the framework for postgraduate studies in Sweden has become more homogeneous, the working conditions of doctoral students are still, to a considerable extent, heterogeneous. There are great differences, ranging from how far the doctoral student has actually got in his/her research programme at the time he/she is accepted, to widely different working conditions for different people in different projects or even within the same project. All this affects the research supervision, which in turn varies considerably from supervisor to supervisor, from department to department, and also between faculties and different kinds of projects. In general the study shows that doctoral students mostly find the research work itself interesting and that their supervisor showed great interest in their work. In spite of this, a large number of students, especially female students, had seriously considered giving up their studies. One of the most common reasons for these considerations was to do with the relationship with the supervisor. Both doctoral students and supervisors felt stress regarding bringing the thesis to a successful close, and the supervisors who were interviewed expressed thoughts about how much they should intervene and either 'apply the brakes' or 'step on the gas'. Nevertheless, the pleasure of supervising stood out in the interviews with the supervisors, and research supervision was quite often described as "exciting", "developing" and "instructive".

Social epidemiology

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

Public health and the epidemiological transition

Many developing countries lack systems for the routine registration of vital events on a nationwide basis. Thus local community-based population

surveys are often needed to understand public health needs and trends.

Fikru Tesfaye, Ethiopia, Ruth Bonita, WHO, Hoang Van Minh, Vietnam, and Nawi, Indonesia

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

Autopsy workshop in Umeå, February 2004

We were also involved with the INDEPTH scientific meeting in May 2004, hosted in Hanoi, Vietnam, closely involving our collaborating field site FilaBavi. This was an exciting opportunity for many of our African colleagues to experience a very different environment within which similar approaches to surveillance are underway. Work on collaborative surveillance of NCD risk factors during various stages of the epidemiological transition in Ethiopia, Vietnam and Indonesia, in collaboration with the WHO/NCD surveillance programme, has continued.

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

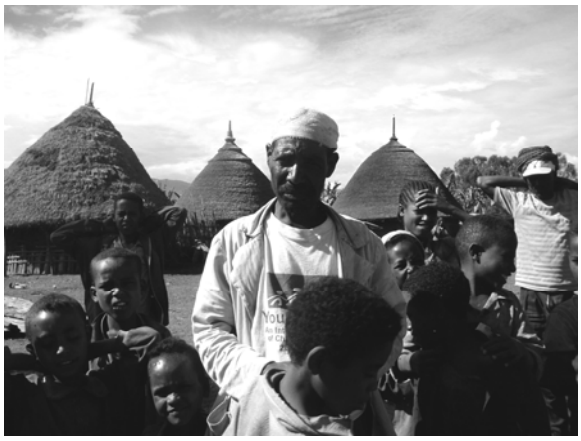
Research team, Jogjakarta, November 2004

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

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

three leading causes of death in the year 2000. The results clearly showed the multiple burdens of NCD risk factors among the Indonesian population. Future research should be directed toward tailoring various community interventions to reduce the risk factor burden.

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



Traditional houses in Butajira

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

In 2004, the total population of the DSS sample grew to 46,950 individuals, a growth rate of 5.7%. The changes were 1,329 births, 297 deaths, 1,718 inmigrations and 213 outmigrations. Divided by area, the rural highland areas experienced a 3.9% population growth, the rural lowlands grew by 5.7% and the urban area by 9.2%. Crude mortality was 6.4/1000 persons at risk in the highlands, 7.9/1000 in the lowlands and 4.5/1000 in the town. Crude birth rates were 28/1000 persons, 35/1000 and 23/1000 in highlands, lowlands and urban areas respectively.

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

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

A study of *Women's health and Domestic violence* has been performed within the BRHP infrastructure. This included qualitative studies exploring attitudes and perceptions about domestic violence, a cross-sectional survey of the prevalence among women in reproductive ages

and its association to mental health, and a study of the association between exposure to domestic violence by the mother and the child survival. The study followed the core protocol and questionnaire used in a WHO multi-country study performed in different parts of the world but also included an additional part for screening of mental disorders (CIDI). The project is a collaborative venture between our Department, the Department of Psychiatry at Umeå University and the Department of Community Health in Addis Ababa. The basic results have been presented in a National Report and will also be included in a WHO Multi-Country Report, 2005. Further analyses of the data, focussing on socio-cultural aspects and on mental health will constitute the basis for two PhD projects by Ethiopian collaborators.

Training of field workers in Butajira, Ethiopia

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

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

The epidemic is still a great public health problem in the region and in Tanzania as a whole. It is therefore important that the longitudinal nature of KARP is utilized for continued monitoring of the direction of the epidemic and for focused sub-studies evaluating the role of interventions to better understand the promoting factors for change. During this bilateral agreement 2003-2007 period we continue to follow the epidemic in the urban area and will also re-visit areas not studied since 1987. The focus will be to assess if and why they have been protected from further spread. The role of social capital in explaining the observed changes will be explored. By also testing and evaluating participatory intervention strategies specifically targeting the youth the project also hopes to contribute in developing culturally acceptable intervention tools.

The new Kagera AIDS Research Project building

The research training and capacity-strengthening component of the KARP is important. Research methodology courses have been developed and organised between the collaborating departments also as part of the feedback of research results to the community. Recently new research students/researchers from epidemiology, as well as from social science, have been enrolled in the collaboration to broaden the research base on both the Tanzanian and Swedish side. A new field organisation has been set up in close collaboration with the Kagera Regional Hospital. A group of new field staff have thus been trained and a project co-ordinator employed to take overall responsibility for the planning and implementation of the field work. During 2004 a KARP website was developed where the project is presented and the main activities and results summarised.

The field workers within the Kagera AIDS Research Project

Public health and social change

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

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

For several decades *Indonesia* has experienced political stability and continued economic growth. Unfortunately, in July 1997 the country was thrown into the economic turbulence also faced by other Southeast Asian countries. There is strong interest from Indonesian researchers to evaluate the effect of the economic crisis on the health of the people in the region. Using different measures of economic strain (inflation rate, prices of staple foods, exchange rate of the Rupiah), the effect on food intake and morbidity among pregnant women has been evaluated.

Before the crisis the food intake of the pregnant women was already mainly plant-based, consisting of rice, nuts, pulses and vegetables. Only small amounts of animal protein were consumed and this decreased even further for all subgroups of women during the crisis. During the crisis, the price of rice increased. Even so the consumption of rice increased for all subgroups and especially so for those selling rice. In this sense rice is a strongly inferior good for which the demand increases as the price increases. Urban poor and rural landless labourers experienced a decrease in intake of most nutrients. Iron status of these groups deteriorated.

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 70 km from Hanoi. It's purpose is to give a perspective on a local population's demographic and health status as well as monitoring on-going changes. FilaBavi is a joint effort with the Vietnamese Ministry of Health, the Hanoi Medical Faculty and the Health Strategy & Policy

Institute, in collaboration with ourselves and IHCAR at the Karolinska Institute.

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

Public health and equity

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

Partner Violence during pregnancy, psychosocial factors and child outcomes in Nicaragua

Partner violence during pregnancy is a potential health hazard for both the woman and the foetus. In Nicaragua, data from a cross-sectional community based study performed in 2003 and 2004, including 478 pregnant women followed during pregnancy, showed a prevalence of emotional, physical and sexual abuse during pregnancy (32.4%, 13.4% and 6.7% respectively). Seventeen percent reported experience of all three forms of violence. Two thirds of the victims reported repeated abuse. Half of the abused women had experienced punches and kicks directed towards the abdomen and 93% had been injured. Factors such as women's age below 20 years, poor access to social resources and high levels of emotional distress were independently associated with violence during pregnancy.

A hospital based case control study conducted in the same setting in 1996, also showed that physical partner abuse during pregnancy is an independent risk factor for low birth weight(LBW), after adjustment for age, parity, smoking, and socioeconomic status. Given a causal interpretation of the association, about 16% of the LBW in the infant population was attributed to physical abuse by a partner in pregnancy.

In 2003, a qualitative approach to seven Nicaraguan women victims of severe physical abuse during pregnancy exposed how emotional and physical implications of abuse are strong during pregnancy. While the access to material and emotional resources showed to facilitate the women's ability to cope with the abuse, the pregnancy itself was a barrier to support from family, friends or society. The social and cultural context plays an important role in supporting male dominance and influences how women victims decide to act and cope. The ability to confront abuse was shown to be determined by a complex interplay of factors such as economic independence, severity of abuse, access to resources, implication of important others (i.e. children), social class and a personal ability to cope with social norms. Abuse was perceived by the victims as a process with defined stages, described through their feelings, reflections and behaviour.

A qualitative study is ongoing where *children's perspectives* on their every day lives *as caretakers* in León, Nicaragua, are explored with the aim of identifying and targeting the most urgent needs and problems these children experience. The involvement of children in the research process is an overall aim of the study. Different methods focusing on key themes in children's lives have been used and adjusted to this particular group of children and their setting. Photographs taken by the participants, documenting their routine responsibilities in their every day lives have been used as material for them to comment on and analyse, as have short narratives written by the participants and individual interviews. Interpretations and analyses of the results and the different methods used are ongoing, and the involvement of children in the research process will open up opportunities for new knowledge, suggestions and ideas based on the children's experiences, when planning public health interventions.

A study exploring the motives and processes related to *suicidal behaviour* among young girls was conducted in *León, Nicaragua*. Individual in-depth interviews were performed with eight girls between 12 and 19 years admitted to hospital for suicide attempts. A model exploring pathways to suicidal behaviour was developed showing that family dysfunction, absent fathers and lack of integration in the society were some of the struc-

turing conditions that lead to emotional distress. Abuse, deaths in the family, break-up from boyfriends or suicide among friends acted as triggering events. A striking finding was the apparent narrative competence among the girls. Based on our findings, preventive strategies are suggested, indicating that suicide prevention programmes for young people must offer support from professionals who are independent from the family and social network of the adolescents and offer a trusting environment which makes use of the resources available to young people .

Evaluative research

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

Social patterning of prevention

In order to reduce the high incidence of cardiovascular diseases and diabetes mellitus, the County Council of Västerbotten decided to start an intervention programme in 1985. Since there were no Swedish prototypes for this type of intervention, a model adapted to Swedish conditions had to be created. It was developed in the municipality of Norsjö and was later disseminated to the 14 other municipalities in the county, forming the Västerbotten Intervention Program (VIP). Up to the end of 2004 more than 75,000 people at ages 40, 50 and 60 years have participated in VIP, with almost everyone filling in a questionnaire and donating blood samples to be stored in the Northern Sweden Medical Biobank. So far, approximately 15,000 people have participated in a 10 year follow up. The programme was designed to combine a population strategy with efforts to meet, examine and give advice individually to people when they were 40, 50 and 60 years of age. Using the *primary care system* as a partner, the programme carried out systematic risk factor screening and counselling by its family medicine providers at the same time as the community intervention programme used strategies to raise public awareness.

Approximately 60% of the annually invited 40 to 60 year olds have participated. Studies have confirmed that there was no social selection bias when comparing participants and non-participants. During the last decade, VIP data has been actively used for epidemiological research, development of new preventive methods in primary care, health economic evaluations, as well as for county council health planning purposes.

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

- One is focusing on *early predictors for type 2 diabetes*, using VIP data and primary care records. This prospective case-referent study includes 237 cases, who did not have diabetes at the VIP screening, but developed the disease and had it subsequently diagnosed after a mean time of 5 years, and 473 referents who were free from diabetes during an observation time of 8 years .The associations between biological markers, socioeconomic factors and life style and type 2 diabetes are evaluated. The study aims to contribute to the knowledge on early perturbations during the course of type 2 diabetes, to develop methods adoptable in every day clinical practise for identifying individuals who are at high risk for future type 2 diabetes and also methods for prevention and treatment of type 2 diabetes.
- The second research project is trying to bring us more knowledge about why middle-aged women seem to swim against the stream and do not *quit smoking* to the same extent that both younger women and younger and middle-aged men do, as well as trying to explore what ex-smokers report to be success factors enabling them to quit smoking. The expectation of this research is to specifically add knowledge that can support general practitioners in their ambition to reduce risk for AMI and chronic obstructive pulmonary diseases.
- A third project tries to assess who, among *hypercholesterolaemic individuals* (s-cholesterol > 8.0 mmol/l) without CVD, really need pharmacological lipid lowering treatment. By developing a new routine for tracking familial hypercholesterolemia and applying this routine to VIP procedure, it might be possible to identify persons and families at high risk for early onset of myocardial infarction. It is well known that pharmacological lipid lowering has a great efficacy. However, less is known about the effectiveness of the pharmacological lipid lowering treatment. Thus this project will also analyse the treatment in terms

of "who gets treated". Socioeconomic patterns of prescribed treatment will be explored and analysis will be made assessing if priority is given to people with a heavier risk factor burden – as Guidelines imply. .

- A forth project is aiming at *developing a risk equation*, predicting the 5 and 10 year risk for an individual to develop CVD (stroke or AMI), when taking both traditional and social factors into account. Health counselling is often quite challenging, and its outcome depends on the interaction between the staff and the individuals. It is well known that risk scores based on CVD prevalence from the 1970s, do not fit particularly well. With this research program it will be possible to develop more accurate estimations based on data from the 1990s. For the present, a core predictive model on myocardial infarction and another model on stroke is about to be developed, ending up with one (validated) risk equation for men and one for women for both AMI and stroke

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

The evaluation of the Norsjö programme was the starting point for a doctoral thesis focussing on *the role of self-rated health in public health evaluation* that was defended in April 2004. One of the studies focused on changes in risk factor load and self-rated health during the ten year intervention period, 1986-1996, with the MONICA area as the reference. The study supports previous results of an overall risk factor reduction for this period and shows an accompanying positive development of self-rated health. Preliminary analysis from the reference area gives additional support for an intervention effect. Qualitative research interviews supplemented the analysis and enabled a discussion about the influence of health related norm systems on self-rated health and of how attitudes and feelings towards the health programme can be linked to the outcome. The results indicate that the unintended consequences have not taken precedence over the intended risk factor reduction but that the influence of self-rated health differs for men and women and for educational groups.

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

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

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

A more health-oriented health care

Assessing public health policy

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

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

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

Screening for breast cancer

Few secondary interventions have been as carefully evaluated, and perhaps therefore as questioned as mammography screening. To evaluate its benefit on breast cancer mortality, an overview of the four randomised controlled trials (RCTs) that have been performed in Sweden was administered by our department. The four cohorts consisting of 282,777 women aged 40-74 years at randomisation have been followed-up three times, through 1989, 1993 and 1996, and a final follow-up through 2002 is ongoing. The last follow-up through 1996 showed that with a median trial time of 6.5 years and a median follow-up time of 15.8 years there was a significant 21% reduction of the breast cancer mortality in the invited group. Based on the results from the RCTs the National Board of Health and Welfare in 1986 issued guidelines for mammography screening. All county councils in Sweden invite women aged 50-69 to mammography screening every second year and about half of the county councils also invite women 40-49 and 70-74 years. To be able to evaluate whether the nationwide service-screening programme is as effective as indicated by the RCTs new approaches have been applied.

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

With support from the American Cancer Society we apply new analytic methods for the evaluation of incidence-based breast cancer mortality, and estimate the number needed to screen to save one life in nine counties in Sweden using individual screening history data representing approximately 45% of Swedish women (screening history for 523,804 women in the pre-screening and 547,018 women in the screening epochs). Regardless of year of diagnosis, there were a total of 6409 breast cancer deaths in the period of study as a whole. Among them, there were of 4844 incidence-based deaths in the two epochs, i.e. death among cases diagnosed within either the pre-screening or

screening period. Analysis of the effect of offering screening, and actually being screened, will be conducted using an alternative statistical analysis applied to all breast cancer deaths in the period of study, in addition to the incidence-based mortality analysis. Data will be analysed using Poisson regression and adjusted, when necessary, for self-selection bias, contemporaneous changes in incidence, and changes in mortality independent of screening.

Client-held health records

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

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

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

Health promotion in the modern society

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

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

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

A more health promoting health service from the perspectives of health professionals is the second project. In April 2003, the Swedish Parliament adopted new national public health objectives. One of the eleven domains of the objectives is "A health and medical service that more actively promotes good health". Improved population health must be an explicit goal for the health services. The basic idea is that health care will be permeated with a health promoting and preventative perspective, and this way of thinking will become a natural part of all care and treatment. The orientation towards health poses a challenge to the health care service to form strategies that develop the health promoting role. The aim of the project is to study the opinions of health care professionals, in order to get their views on conception of health and health promoting, and to develop greater understanding about the obstacles and opportunities for the health promoting way of work. The methodology is both quantitative and qualitative.

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

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

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

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

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

This research project focused on working conditions in health care organisations. The aim was to study work satisfaction, job expectations and career preferences among recently graduated health professionals. In total 1,400 nurses, physicians, occupational therapists and physiotherapists were studied in a national survey that was performed in collaboration with Statistics Sweden. Questions about working conditions, leadership and stress were covered, including the Job Strain questionnaire (DCS) and the Effort-Reward-Imbalance (ERI) questionnaire. Response rate was 80 %. Gender was the main analytical category and there was a need to analyse paid as well as unpaid work in analyses of working conditions. Analyses revealed major dissatisfaction with work organisation and health care management, especially among those working in the public sector. A majority of the women experienced work stress and reported having a heavy workload at home, which may have a spill over effect on career opportunities. Very few men (< 5%) reported having main responsibility for household work and children. Swedish health care is facing an increased scarcity of employees and therefore the dissatisfaction described should be seen as a warning sign. Efforts must be made to make health care an attractive arena for future jobs. In addition, the results imply that the division of labour in unpaid work is far from gender equal, not even among those young professionals who are the focus in this study.

Social insurance research

Within the field of *social insurance research* a study is being performed regarding the high incapacity rate in Västerbotten, mainly the number of days with sickness allowance and disability pension. The project is being conducted together with the Social Insurance Office in Västerbotten. The aim of the study is to find ways to reduce the high incapacity rate. The study describes and analyses the situation for persons on sick leave, the various actors' perception of their roles for those on long-term sick leave, and the different parties' perceptions of the other actors and of co-operation. Interviews with insurance

office employees, doctors, employers and persons on long-term sick leave were supplemented by questionnaires to persons on long term sick leave, to the board of social insurance and persons reporting on cases concerning early retirement. The results of the interviews with persons on sick leave showed that they had difficulties in asking for help and support. They felt such loyalty to their employers that they did not ask for adjustments of working places when needed. The results of the questionnaire given to persons on long-term sick leave showed that women took a greater responsibility for their own rehabilitation, while the employers showed an earlier interest in sick male employees than in sick female employees. The employers were also keener to adjust working places for men than for women.

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

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

Health economic evaluation research

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

During 2001, a PhD project along the first line was launched aiming to combine economic and gender theory. The point of departure for one sub-study is the well-known observation that women live longer but seem to suffer more illness than men. The policy conclusions suggested as a response to this observation are apparently very different, and the reason is the normative component applied in the decision-making process. The purpose of this study is to comparatively apply different theories such as welfarism, extra-welfarism, egalitarianism and normative gender theory in the situation mentioned above, and to show the policy implications following from each of these. In a second study the relationship between gender and health was investigated. The population consisted of all Swedish couples who had their first child together in 1978. Equality pointers used were income, education, parental leave and temporary child care. Health measures used were mortality and sickness leave during the time period 1978 to 2003. It was indicated that equal women and men in the domestic sphere run lower risks of mortality and morbidity. While in the public sphere, equal women have increased risks and equal men decreased risks.

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

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

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

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

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

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

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

During the Bavi workshops, the need for assessing the health care system in Vietnam was raised. The main idea is to develop a general multi-criteria approach, for instance, that people should pay taxes or insurance fees according to ability, that access to health care should solely be based on need, and that resources should be used effectively. The factual situation can in the next step be compared with these criteria, giving the possibility to assess and evaluate the different components of the health care system as well as the whole system. Most of the fieldwork in this research can be done in Bavi using information collected in the field laboratory. The research programme also aims at co-ordinating master and doctoral studies, hopefully increasing the usefulness of the research results as a base for planning and decision-making in Vietnam.

During 2002 a PhD-project within this research programme was launched. Focus in this PhD-plan is the vicious circle of poverty and ill health. The topic is injuries and their causes and consequences but it could have been any lasting and severe disease. Poverty and health have very close links to economic development and to how health care is financed. Out-of-pocket payment seems to increase the risk of poverty while prepaid health care reduces it. It has been shown that poverty is a risk factor for injuries and that injuries cause a considerable loss of income in affected families.

Smoking prevention from a regional, national and international perspective

Tobacco-use greatly increases the risk of premature death. Each year tobacco products kill close to 5 million people around the world, and the

numbers are increasing. 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 main strategies in Sweden to reduce smoking on a societal level during the last decades have been through information, taxation and legislation. At the group and individual level the most important strategies have been smoking cessation targeting adults and supporting young people in saying no to tobacco. International studies have shown that it is possible to prevent or postpone the onset of tobacco use. From a Swedish perspective, tobacco prevention in young people is an under researched field. A research project at the department is addressing the issue. Below there are different examples of our work in the field of tobacco prevention.

The Tobacco free duo camping using famous young singers and athletes taking a stand against tobacco use

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

Considering the magnitude of smoking as a public health problem as well as the difficulties in influencing young people's behaviour, tobacco issues should continuously be developed and studied. National studies on young people's use of tobacco were carried out by National Board of Health and Welfare and the National Public Health Institute in 1987 and 1994. In addition to studying the tobacco prevalence, the second study also covered young people's attitudes to tobacco and factors influencing their use of it. In 2003 we were commissioned by the National Public Health Institute to repeat the study. The study was performed in 2004 and a report was presented. A popular science report will be written in 2005. The aim of the study was to follow up and compare the new data with the results from 1994, and to look into some added issues such as young people's attitudes on environmental smoke, snuff, smoking in public places and towards the tobacco industry. The study shed light on changes over time in tobacco prevalence, knowledge and attitudes but also age and gender differences.

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 the unborn babies. Over the past three years collaboration has been discussed and planned between us and the Medical Research Council in Cape Town. Studies were carried out in Western Cape during 2001-2003 to identify the influences on coloured pregnant women causing them to smoke, midwifes who provide care during pregnancy and the perspective of the key informants in the health services regarding the high smoking rate. Together with experiences from models of intervention, for example models used in Sweden, the results from

the studies formed a base for planning an intervention. Through a series of exchange visits and joint workshops we have designed a study consisting of a pilot intervention and a plan for evaluation. This is done in close collaboration with people involved in training midwives and those planning and developing antenatal services nationally in South Africa and in the province of Western Cape. During 2004 a South African Master student presented a thesis on smoking during pregnancy within this framework.

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

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

A seminar, titled "Translating Health Research into Practice ", celebrating the Ten Year Jubilee of CHNRL was held in October 2004, and was attended by research colleagues from Umea University. Professor Stig Wall talked on “Research collaboration with CHN-RL: A long term experience”. Other speakers with an “Umeå connection” were Nawi Ng and Elli Nur Hayati and our former PhD students Detty Nurdiati and Ninuk Sri Hartini. The meeting was attended by about 150 persons representing Gadjah Mada University, Faculty of Medicine, national and local health planners and students. During its' ten-years of existence, the CHNRL has contributed substantially to the research and academic environment in the department at Gadjah Mada University.

Young tobacco producers in Jogjakarta, Indonesia

4. Training at Umeå International School of Public Health

Staff and students in Vindeln, October 2004

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

Magister of Public Health Programme

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

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

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

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

Sources of Master of Public Health students 1991-2004

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

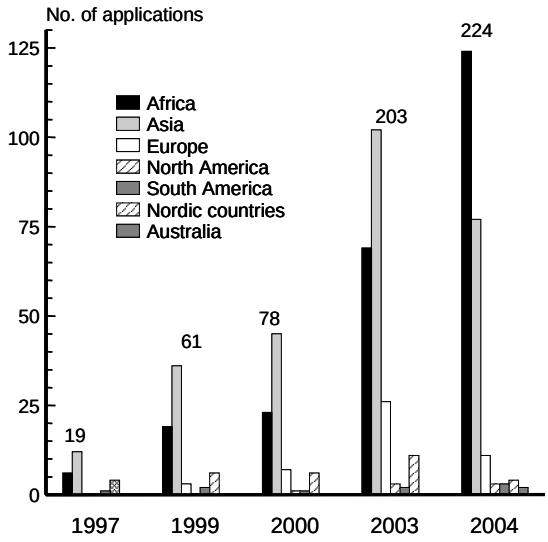


Figure 10. Applications to the Public Health Programme

To date, 272 students from 48 countries, including Sweden, have joined the programme (see map above). In the autumn of 2004, 34 new students joined the programme.

While many of the international students have been recruited through research connections, a growing number are “free movers”, i.e. students moving independently on an international training market. From 1996 we have received financial support from the Swedish STINT foundation to offer scholarships to students from certain developing countries. As of 2001 the East European Committee is also sponsoring two MPH students from Russia. Beginning with the academic year 2003/04, the regional County Council has given the department two scholarships annually to award to students from the new EU member countries for MPH studies. The first two of these, Cyprus and Malta, completed their studies in June 2004 and two students from Latvia joined us in August.

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

In 2004, 25 students received the Master degree, 3 Swedes and 22 non-Swedes, with a number of stragglers completing their theses at home before

they can apply for the degree. Over the years there has been a fairly consistent sex ratio pattern, with a predominance of women students among the Swedes and mainly men among the non-Swedes, but in the last few years the proportion of female students from developing countries has been increasing. Among the 2004/05 MPH group of students, 47% are females.

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

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

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

Elective courses 2003/04	
Qualitative methods	10 p
Biostatistics	10 p
Medical sociology for public health	5 p
Medical sociology: inequity in health	5 p
Public Health Informatics	10 p
Evaluation in Public health	10 p
Environmental medicine	10 p

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

Topics of completed MPH theses are shown in the publication list provided on page 72.

Summer course: Epidemiology and Field Research Methods

The summer course 2004

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

The course has become an important research training base for health researchers, health planners and practitioners from the global network that Sweden is part of. In 2004 we received more than 60 applications for the 24 available course places. We strive for an international and multidisciplinary attendance where the participants' own experiences are part of the curriculum. Quantitative and qualitative methodologies are practically applied to analyse authentic data from our research collaborations. The course is given high priority and the team of teachers/facilitators always includes colleagues from the bilateral collaboration out of which the data material emanates.

Group work

Twenty-four students participated in the summer course 2004. Seven of the participants came from Sweden. Other countries represented were Cambodia, Ecuador, Ethiopia, Mozambique, Nicaragua, Tanzania, Uganda, USA, Vietnam and Zambia.

Research training

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

Presently (2004) 40 research students are registered at the department, 20 men and 20 women (Table 5). Fifteen PhD students have been recruited within international research collaborations, while 25 are Swedish research students. During 1987-2004 36 PhD theses (17 by women) and 7 licentiate theses (6 by women) were defended at the department. Fifteen of the PhD theses and 5 licentiate theses were defended by international research students.

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

Several of the research students of the department are affiliated with another department also, e.g. a clinical department, or to a university in another

country. Corresponding representation of two or more departments is often found among the advisors to the research students.

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

First Doctoral Students Week in Umeå 2004

Currently we have around 40 research students are attached to the division of Epidemiology and Public Health Sciences, with almost half of them are living in Umeå and the rest widely spread around the world. All students spend time in Umeå for tutoring or taking courses, but they rarely meet since they are all busy with their own research. For the first time the doctoral students decided to arrange a special course week for all research students at the division for the first time.

Participants in the doctoral student's week 2004

So in August 2004 around 25 PhD students met in Umeå for a series of lectures, workshops, dinners and excursions. Apart from the specially designed course in *Philosophy of Science and Research Ethics*, then discussed how to work together with the supervisors and how to interact effectively with the media. Specially invited lecturers and facilitators joined for these sessions.

The supervisors joined the PhD students for one day during the week and they discussed supervision and the relationship between the two parties. The arguments and ideas raised in the discussion lead to the formation of a working group of two students and two supervisors. The mandate for the group is to elucidate the responsibilities, requirements and rights of the PhD-students and supervisors. The aim is to construct guidelines for supervision in PhD-training.

Even the weather decided to co-operate with the group during the whole week so that the excursion on the Baltic Sea was made in perfect warm, light winds and the sun was shining most of the time!

Boat trip on the Baltic sea

Together the PhD students formed a network of support to

- e-mail the group when a "non-Umeå" student is coming to town so that perhaps a coffee or lunch meeting might be arranged;
- disperse newly published manuscripts by email so that they can see each other's work;
- send out copies of manuscript drafts for comments by fellow students who have the interest and time to review them;
- review each other's proposed press releases;
- maintain a special doctoral page on the homepage and use it for sharing information, photos and downloading large documents of interest for all

Single courses

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

Biomedical programme

During the first semester of the Biomedical programme our unit is responsible for a 5 points course *Epidemiology and biostatistics*. In the autumn 2004 course, 45 students participated.

Increasing UISPH involvement in teaching outside Sweden

Besides the regular courses offered in Umeå, such as our summer course and the MPH programme, we have intermittently been involved in teaching outside our own university. Some of these activities are organised within teacher exchange programmes while others are ad hoc courses, organised within research collaborations. In 2002 there was an increase in the involvement in training abroad and in requests for such involvement.

Teachers and students in the UNIN course, 2004

In 2004, two extramural courses on epidemiologic methods were given. The first was in January as part of a collaboration with two South African universities, Witwatersrand in Johannesburg and the University in the North (UNIN) in Polokwane, now the University of Limpopo. The venue for the course was the University of the North, which is one of the formerly black universities. The course was for two weeks, with a focus on quantitative research methods in epidemiology. Facilitators of the course were Peter Byass and Anders Emmelin. The counterpart and facilitator in UNIN was Dr Marianne Alberts, who was also instrumental in arranging the course.

In April we offered a one week course in Addis Ababa in collaboration with the Department of Community Health, Addis Ababa University, and with the training division of the All Africa Leprosy Rehabilitation and Training Centre and the Armauer Hansen Research Institute, both of Addis Ababa. Facilitators were Alemayehu Worku and Anders Emmelin.

In the discussions about teaching collaboration, there has lately been a shift of focus from the subject matter and the international experience to teaching methods. There is now a growing interest in sending observers to participate in courses, as well as in building collaborative teams for training methods for teaching specific subjects. During the autumn of 2004, we received a planning grant from Sida/SAREC for preparing a proposal along these lines. This is to have a collaborative approach, where teaching staff from Umeå join colleagues from our partner institutions in workshops on teaching methodology in research training, as well as on preparing for research training.

Teachers and students in a course on qualitative methodology at CIDS, León, Nicaragua

A teachers' exchange programme also exists between CIDS, León in Nicaragua and Epidemiology and Public Health Sciences in Umeå in the Master of Public Health Programmes at the two universities. Several teachers from the two sites were engaged in this exchange during 2004.







Some student activities during 2004

Table 4. Seminars at the department 2004.

January	**Ninuk Sri Hartini** (pre-dissertation). Food habits, nutrient intake and nutritional status among pregnant Indonesian women during the economic crisis.
February	**Per Nordin**. Kontaktgrad som underlag för planering av hälso- och sjukvård
	Stig Wall and Urban Janlert. The World Health Report 2003: conveying new insights while refurbishing old ideas.
	Maria Emmelin (pre-dissertation). Self-rated health in a public health perspective.
March	**Hoang Ming Hang**. Epidemiology of accidents and injuries in rural Vietnam: A community-based survey.
	Stephen Martin. EPIET in a time of SARS – Experiences from the European Programme for Intervention Epidemiology Training.
	Jeremiah Chikovore (dissertation). Gender power dynamics in sexual and reproductive health: A qualitative study in Chiredzi District, Zimbabwe.
	Ninuk Sri Hartini (dissertation). Food habits, nutrient intake and nutritional status among pregnant Indonesian women during the economic crisis.
April	**Inge-Bert Täljedal**. Hälsobegreppet
	Gisela Dahlquist and Marianne Hultmark. Ny organisation för etikprövning av humanforskning
	Lars Weinehall. Checklistor och screening – ett hot mot konsultationen.
	Maria Emmelin (dissertation). Self-rated health in public health evaluation
	Leonie Dapi Nzefa. Food habits of school children in relation to socioeconomic and cultural factors in Cameroon
	Sven Hassler. The health conditions in the Sami population of Sweden 1961-2002. Causes of deaths and incidence of cancer and cardiovascular diseases.
May	**Malin Eriksson.** Social Capital for Public Health Interventions - Prerequisites, Barriers & Prospects
	Klas-Göran Sahlén. Is elderly unfairly treated in health economics? An illustration from two communities
	Firdy Permana. Environmental Tobacco Smoke (ETS) exposure: children's respiratory effects and the strategy to reduce domestic exposure
	Helene Johansson (doctorand seminar)
	Eliette Valladares (midterm seminar). Physical abuse, psychosocial factors and pregnancy outcome in Nicaragua
	Torbjörn Lind (dissertation). Iron and zinc in infancy: Results from experimental trials in Sweden and Indonesia.
June	**Göran Fahlén.** Att mäta arbetsrelaterad ohälsa, frågeformuläret Effort - Reward- Imbalance"
August	**Hang Minh Hang** (pre-dissertation). Epidemiology of unintentional injuries in rural Vietnam.
September	**Ann Nafziger** (mid-term seminar). Obesity in predominantly rural areas. Comparisons of northern Sweden and upstate New York state, USA.
	John Porter. TB and infectious disease policy: an interdisciplinary perspective.
	Kerstin Edin (Mid-term seminar). Våld i samband med graviditet och barnafödande-kvinnan och mannen
October	**Lars Jerdén** (Mid-term seminar). Empowerment and prevention – evaluation of new tools
	Lennart Köhler. Child Health Indicators - international and local experiences
	Hang Minh Hang – dissertation. Epidemiology of unintentional Injuries in rural Vietnam
November	**Jenny Sandberg**. Prevention of mother to child HIV transmission in Malawi
	Ed Fottrell. Methodological issues in mortality surveillance
	Monika Gustafsson. Shame, struggle and respect - a qualitative approach for understanding chronic pain
	Lars Jerdén. Public health in the West Bank and Gaza Strip
	Fatwa Sari Tetra Dewi. Tobacco control activities in south area of Java, Indonesia
December	**Anna Månsdotter** - midterm seminar. Health, economics and gender - aspects on how to judge societal change
	Anne Fischer. Introduction to Rasch Measurement Methods for Developing New or Evaluating Existing Assessments.
	Nguyen Xuan Thanh - midterm seminar. The injury poverty trap - causes, consequences and possible solutions

Table 5. Doctoral students registered at the division 2004.

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
Jeremiah Chikovore	Sociologist (diss. 040312)	Gender roles and women's reproductive health: An explorative study on male role in reproductive health with special emphasis on abortion.
Kjerstin Dahlblom	BA	Children caring for siblings. Children's perspectives of caretaking in León, Nicaragua – a qualitative and quantitative approach
Kerstin Edin	Midwife	Våld i samband med graviditet och barnafödande – kvinnan, barnet och mannen
Berit Edvardssson	Family physician	Varför kan en del människor med sjukahussymptom arbeta och andra inte
Anders Emmelin	BSc, health inspector	Air pollution epidemiology
Maria Emmelin	BA, med sociol (diss. 040423)	Ethical and social considerations in public health work
Malin Eriksson	Social worker	Socialt kapital som verksam resurs i befolkningsinriktade folkhälsointerventioner – förutsättningar, hinder och möjligheter.
Mesganaw Fantahun Afework	MD, Community Health	Mortality patterns by age and gender in rural Ethiopia
Stephen Goldin	MD, child psychiatrist	Stress, coping and health: life stories of refugee children
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
Hoang Minh Hang	MSc, stat. (diss 041015)	Epidemiology of injuries in rural Vietnam
Sven Hassler	BA, political sciences	The health condition in the sami population in Sweden, 1961-2002. Causes of death and incidences of cancer and cardiovascular diseases.
Dao Lan Huong	MD	Mortality in transitional Vietnam
Kerstin Hultén	Nutritionist	Breast cancer and dietary habits – an epidemiologic study of protective factors
Shabbir Ismail Abbas	MD, Community Health	Epidemiology of HIV/AIDS and high risk sexual behaviours among populations of Central Ethiopia
Lars Jerdén	MD, general practitioner	Empowerment och prevention – utvärdering av nya verktyg
Helen Johansson	Physiotherapist	Professionernas syn på hinder och möjligheter för en mer hälsofrämjande hälso- och sjukvård
Torbjörn Lind	MD, paediatr (diss. 040528)	Micronutrients during infancy and childhood: Dietary determinants and functional outcomes
Emil Löfroth	Economist	Ekonomiska, etiska och epidemiologiska aspekter på fördelningen av resurser för att förebygga hjärkärl-sjukdom.
Anna Månsdotter	Economist	Hälsoekonomisk utvärdering i ett genusperspektiv
Anne Nafziger	Cardiologist	Obesity in predominantly rural areas: comparisons of northern Sweden and upstate New York, USA
Nawi Ng	MD	Non-communicable disease risk factors and cause specific mortality in Purworejo district, Indonesia
Maria Nilsson	Social worker	Hälsofrämjande arbete bland ungdomar – att förebygga tobaksbruk
Margareta Norberg	MD, general practitioner	Tidiga riskmarkörer för utveckling av typ 2 diabetes TRIM-studien
Per Nordin	Statistician	Kontaktgrad och vårdkonsumtion, en alternativ ansats för att belysa behov av sjukvård.
Leonie Dapi Nzefa	Nutritionist	Food habits of school children in relation to socioeconomic and cultural factors in Cameroon
Nils Oscarsson	OD, dentist	Att välja prevention i ungdomstandvården. Hälsoekonomiska analysmetoder som beslutsunderlag
Firdy Permana	MD	Environmental tobacco smoke exposure (ETS): children's respiratory effects and the strategy to reduce domestic exposure
Klas-Göran Sahlén	Nurse	Missgynnas äldre i hälsoekonomisk utvärdering? – illustration från två lokalsamhällen.
Rubina Shaheen	MD	Combined interventions against maternal depletion and low birth weight in Bangladesh: Issues of cost effectiveness, compliance and equity
Ninuk Sri Hartini	BSc, nutrit (diss. 040326)	Changing dietary intake and nutritional status in pregnant women and children during the economic crisis in Indonesia
Fikru Tesfaye	MD, Community health	Surveillance of risk factors for non-communicable diseases in Butajira district, Ehtiopia
Nguyen Xuan Than	MD	The "injury poverty trap" – causes, consequences and possible solutions
Susanne Waldau	Journalist	An organisational strategy for priority setting in health care
Maria Wiklund	Physiotherapist	"Kroppsjag, empowerment och välbefinnande" - Prevention och hälsofrämjande för tonårsflickor med stressrelaterad & psykosomatisk ohälsa
Eliette Valladares Cordoza	MD, gynaecologist	Physical abuse, psychosocial factors and pregnancy outcomes in Nicaragua
Hoang Van Minh	MD	Cardiovascular diseases in Bavi district, Vietnam: A journey from the past to the future

Table 6. Visiting scientists and guest researchers at the division during 2004.

Bangladesh	Rubina Shaheen	ICDDRB, Dhaka
Cameroon	Leonie Prudence Dapi Nzefa	Medicine and Biomedical Sciences, University of Yaoundé
Ethiopia	Fikru Tesfaye	Community Health Department, Addis Ababa University
	Mesganaw Fantahun Afework	Community Health Department, Addis Ababa University
	Yemane Berhane	Community Health Department, Addis Ababa University
	Yegomawork Gosaye	Community Health Department, Addis Ababa University
Gambia	Tumani Corrah	Director, MRC Laboratories
Germany	Michael Knipper	Institut für Geschichte der Medizin, Justus-Liebig Universität Gießen
Indonesia	Fatwa Sari Tetra Dewi	Public Health, Gadjah Mada University, Jogjakarta
	Firdy Permana	School of Medicine, Mataram University, Lombok
	Nawi Ng	Public Health, Gadjah Mada University, Jogjakarta
	Ninuk Sri Hartini	Community Health and Nutrition Research Laboratory, Gadjah Mada University Jogjakarta
Malawi	Fyson Kasenga	Malamulo SDA Hospital, Makwasa
Nicaragua	Elliette Valladares	Obstetrics, UNAN-León, León
	Rodolfo Peña	Obstetrics, UNAN-León, León
	Felix Zelaya	Obstetrics, UNAN-León, León
South Africa	Kathy Kahn	Dept of Community Health, Wits University, Johannesburg
South Africa	Kathy Kahn	Witwatersrand
Sweden	Maj-Lis Follér	Iberoamerikanska Institutet, Göteborg
	Sophie Graner	Dpt of Obstetrics and Gyneccology, Karolinska Univ. Hospital
	Solvieg Freudentahl	SIDA, Stockholm
	Annika Johansson	IHCAR
	Marie Klingberg	IHCAR
Switzerland	Ruth Bonita	Director of NCD Surveillance, WHO Geneva
	Lulu Muhe	Division of Child Health, WHO Geneva
USA	Paul Jenkins	Basset Research Institute, Cooperstown, New York
	Anne Nafziger	Basset Research Institute, Cooperstown, New York
UK	John Porter	London School of Hygiene and Tropical Medicine
	Edward Fottrell	Nottingham
Vietnam	Nguyen Xuan Than	Medical Economics, Hanoi Medical University, Hanoi
	Dao Lan Huong	Hanoi, Vietnam
	Hoang Van Minh	Public Health, Hanoi Medical University, Hanoi
	Hoang Minh Hang	Hanoi Medical University, Hanoi
	Do Duc Van	Viet Duc Surgical Hospital, Hanoi
	Nguyen Thi Bich Thuan	Ministry of Health, Hanoi
Zimbabwe	Jeremiah Chikovore	Psychiatry, Bulawayo College of Health, Bulawayo

5. ADVOCACY

Consultancy and advisory functions

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

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

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

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

Scandinavian Journal of Public Health

A five-year appointment of the Umeå Editorial Office has come to an end and we can look back on an interesting and rewarding period in transition. We have experienced a steady increase of incoming manuscripts starting out with 131 in 2000 to 205 in 2004. Whether we like it or not, the impact score is referred to by many and we can announce that we have achieved a critical level by reaching 1.03 for 2003 (the average number of citations in 2003 per article published in 2001-02) and an immediacy index of 0.15 (15% of articles published in 2003 are cited the same year).

During 2004 we reached an acceptance rate of 30%, allowing us to say that the quality of the journal is steadily rising. For authors, we want to further improve on *two time lags* – the time it takes to review and the time it takes to appear in print, once accepted. The former has come down from an average of 121 days in 2000 to 78 days in 2004 while the latter seems to rest at about 10-11 months. Scholarone, a system for online submission and manuscript handling, will be introduced by our publisher in 2005 which may speed up administrative routines. Our 500 active reviewers, 130 of which are non-Scandinavian, are doing a very good job and we may not ask for much more of their unpaid time.

We attribute much of the credit for up-grading *Scandinavian Journal of Public Health* to our committed Editorial Board. As co-editors they take part in day-to-day work by sharing decisions about individual papers and they are also instrumental in policy development of the journal. Our annual board meetings, made possible by a publication grant from FAS, the Swedish Council for Working Life and Social Research, are important opportunities for reflecting, discussing and evaluating the development of the journal. It is during these meetings that we have launched new sections in the journal, such as *Public Health Debate*, *Public Health Calendar*, opened up for papers on *Study design* and suggested new *Editorials* and *Supplements*. This year the meeting was held at STAKES (översättning) in Helsinki, Finland and hosted by co-editor Professor Elina Hemminki. In connection with the meeting we were also given an overview of different research departments at STAKES and its role as a Publication Office.

Editorial Board meeting in Helsinki, October 2005

Scand J of Public Health 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 and we hope that he will continue to encourage the Associations to make this journal first choice for their members.

Table 7. Consultancy and advisory functions of staff members

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

6. LIST OF PUBLICATIONS

Original articles

1. Ahlberg BM, Krantz I, Lindmark G, Warsame M. ”It is only a tradition”: Making sense of eradication and persistence of female “circumcision” within a Swedish context. *Critical Social Policy*. In press.
2. Alexandersson O, Bixo M, Högberg U. Evidence-based changes in term breech delivery practice in Sweden. *Acta Obstet Gynecol Scand.* In press.
3. Ali M, Asefaw T, Byass P, Beyene H, Pedersen FK. Helping northern Ethiopian communities reduce childhood mortality: population-based intervention trial. *Bull WHO* 2005; 83: 27-33.
4. Andersson M, Stecksén-Blicks C, Stenlund H, Ranggård L, Tsilingaridis G, Mejàre I. Detection of approximal caries in 5-year-old Swedish children. Caries Res 2005; 39: 92-99.
5. Axelsson S, Söder B, Nordenram G, Petersson LG, Dahlgren H, Norlund A, Källestål C, Mejare I, Lingström P, Lagerlöf F, Holm AK, Twetman S. Effect of combined caries-preventive methods: a systematic review of controlled clinical trials. *Acta Odontol Scand* 2004; 62: 163-9.
6. Barnekow-Bergkvist M, Hedberg G, Janlert U, Jansson E. Health status and health behaviour in men and women at the age of 34. *Eur J Public Health*. In press.
7. Bergdahl J, Stenberg B, Eriksson N, Linden G, Widman L. Coping and self-image in patients with visual display terminal-related skin symptoms and perceived hypersensitivity to electricity. *Int Arch Occup Environ Health* 2004; 77: 538-42.
8. Berglin E, Padyukov L, Sundin U, Hallmans G, Stenlund H, Van Venrooij WJ, Klareskog L, Dahlqvist SR. A combination of autoantibodies to cyclic citrullinated peptide (CCP) and HLA-DRB1 locus antigens is strongly associated with future onset of rheumatoid arthritis. *Arthritis Res Ther* 2004; 6: R303-8.
9. Björkenstam C, Edberg A, Ayoubi S, Rosén M. Are cancer patients at higher suicide risk than the general population? A nation wide register study in Sweden from 1965-1999. *Scand J Public Health*. In press.
10. Buitron D, Hurtig AK, San Sebastian M. Nutritional status in indigenous children under five in the Amazon region of Ecuador. *Rev Panam Salud Publica* [in Spanish] 2004; 15: 151-9.
11. Bordas P, Jonsson H, Nyström L, Cajander S, Lenner P. Early breast cancer deaths in women aged 40-74 years diagnosed during the first 5 years of organised mammography service screening in north Sweden. *The Breast* 2004; 13: 276-283.
12. Byass P, Fottrell E, Huong DL, Berhane Y, Corrah T, Kahn K, Muhe L, Van DD. Refining a probabilistic model for interpreting verbal autopsy data. *Scand J Public Health* (accepted).
13. Collin P, Kaukinen K, Vogelsang H, Korponay-Szabò I, Sommer R, Schreier E, Volta U, Granito A, Veronesi L, Mascart F, Ocmant A, Ivarsson A, et al. Antiendomysial and antihuman recombinant tissue transglutaminase antibodies in the diagnosis of coeliac disease: a biopsy-proven European multicenter study. *Eur J Gastroenterol Hepatol* 2005;17:85-91.
14. Ellberg L, Persson M, Lundman B, Högberg U. The early discharge and family suite programs do not increase health care utilization after birth. *J Obstet Gynecol Neonatal Nursing*. In press.
15. Ellberg L, Högberg U, Lundman B, Lindholm L. Satisfying parents’ preferences with regard to postnatal care is cost-minimizing. *Acta Obstet Gynecol Scand*. In press.
16. Ferry SA, Holm SE, Stenlund H, Lundholm R. Monsen TJ. The natural course of uncomplicated lower urinary tract infection in women illustrated by a randomized placebo controlled study. *Scand J Infect Dis* 2004; 36: 296-301.
17. Franklin K, Gíslason T, Omenaas E, Jõgi R, Juel Jensen E, Lindberg E, Gunnbjörnsdóttir M, Nyström L, Laerum BN, Björnsson E, Torén K, Janson C. The influence of active and passive smoking on habitual snoring. *Am J Respir Crit Care Med* 2004; 170: 799-803.
18. Glas B, Levin JO, Stenberg B, Stenlund H and Sunesson A-L. Variability of personal chemical exposure in eight office buildings in Sweden. *JEAEE* 2004; 14: S49-S57.
19. Gustavsson M, Ekholm J, Öhman A. From shame to respect – musculoskeletal pain patients’ experiences of rehabilitation. *Rehabilitation Medicine* 2004; 36: 97-103.
20. Hagberg L, Lindholm L. Is promotion of physical activity a wise use of societal resources? Issues of cost-effectiveness and equity in health. *Scand J Med Sports* (accepted).
21. Haglund B, Köster M, Rosén M. Inequality in access to coronary revascularisation in Sweden. *Scand Cardiovascular J*. In press.

22. Hammarström A, Janlert U. An agenda for unemployment research – a challenge for public health. *Int J Health Service.* In press.

23. Hang HM, Byass P, Svanström L. Incidence and seasonal variation of injury in rural Vietnam: a community-based survey. *Safety Science* 2004; 42 :691-701.

24. Hansen AJ, Edlund C, Bränholm I-B. Life satisfaction, sense of coherence, coping resources and locus of control in a group of persons on sick leave and return to work. *Work* (accepted).

25. Hansen A.J, Edlund C, Henningsson M. Factors relevant to a return to work: a multivariarate approach. *Work* (accepted).

26. Hartini TN, Padmawati RS. Lindholm L, Surjono A, Winkvist A. The importance of eating rice: changing the food habits among pregnant Indonesian women during the economic crisis. *Soc Sci Med* (accepted).

27. Hultdin J, Thögersen AM, Jansson JH, Nilsson TK, Weinehall L, Hallmans G. Elevated plasma homocysteine: cause or consequence of myocardial infarction? *J Intern Med* 2004; 256 :491-8.

28. Hurtig AK, San Sebastián M. Incidence of childhood leukaemia and oil exploitation in the Amazon basin of Ecuador. *Int J Occupational Environmental Health* 2004; 10: 245-50.

29. Håkansson S, Faaroqi A, Holmgren PÅ, Serenius S, Högberg U. Proactive management promotes infant outcome after extremely preterm birth - a population based comparison of two perinatal management strategies. Proactive management promotes outcome in extremely preterm infants: a population-based comparison of two perinatal management strategies. *Pediatrics* 2004; 114: 58-64.

30. Håkansson S, Högberg U. Registering av dödfödda har stora brister. *Dagens Medicin* 2004; 35: 22.

31. Högberg U. Komma naturen till hjelp, Guds hjelp, wanmackt - Barnmorskan Elisabeth Holmgren i Tuna socken. *Jodermodern*, 2004; häfte 9: 4-7.

32. Högberg U. The decline in maternal mortality in Sweden: the role of community midwifery. *Am J Public Health* 2004; 94: 1312-20.

33. Högberg U. An 'American dilemma' in Scandinavian childbirth: unmet needs in health care? *Scand J Publ Health* 2004; 32: 75-7.

34. Högberg U. Community Midwives: a primer for improved reproductive health in 19th Century Sweden. *Am J Publ Health* 2004; 94: 1312-1320.

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

36. Högberg U, Wang M. Depression and pregnancy – may selective serotonin reuptake inhibitors be associated to behavioural teratogenicity? *Eur J Obstet Gynecol.* In press.

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

38. Janlert U. The population as a patient (Editorial). *Scand J Public Health* 2004; 32: 401-2.

39. Janlert U. Professurer och professorer i socialmedicin i Sverige. *Socialmedicinsk tidskrift* 2004; 81: 202-6.

40. Jerden L, Weinehall L. Does a patient-held health record give rise to lifestyle changes? A study in clinical practice. *Fam Pract* 2004; 21: 651-3.

41. Johansson L, Stenlund H, Lindqvist P, Eriksson A. A survey of teenager unnatural deaths in northern Sweden 1981-2000. *Accidt Anal Prev* 2005; 37: 253-258.

42. Johansson P, Tillgren P, Guldbrandsson K, Lindholm L. A model for cost-effectiveness analyses of smoking cessation applied to a Quit-and-Win contest. *Scand J of Public Health* (accepted).

43. Jonson C, Norbäck D, Omenaas E, Gislason T, Nyström L, Jõgi R, Lindberg E, Gunnbjörnsdottir M, Norrman E, Wentzel-Larsen T, Svanes C, Jensen EJ, Torén K, on behalf of the RHINE study group. *Occup Environ Med* 2005; 62: 113-18.

44. Kero A, Högberg U, Lalos A. Wellbeing and mental growth-long-term effects of legal abortion. *Soc Sci Med* 2004; 58: 2559-69.

45. Khatun M, Stenlund H, Hörnell A. BRAC initiative towards promoting gender and social equity in health: a longitudinal study of child growth in Matlab, Bangladesh. *Public Health Nutrition* 2004; 7: 1071-1079.

46. Krantz I, Sachs L, Nilstun T. Ethics and vaccination. *Scand J Public Health* 2004; 32; 172-8.

47. Krantz I, Löwhagen GB, Ahlberg BM, Nilstun T. Ethics of screening for asymptomatic herpes virus type 2 infection. *BMJ* 2004; 329: 618-21.

48. Kyvik KO, Nyström L, Gorus F, Songini M, Oestman J, Castell C, Green A, Guyrus E, Ionescu-Tirgoviste C, McKinney PA, Michalkova D, Ostrauskas R, Raymond NT. The epidemiology of Type 1 diabetes mellitus is not

the same in young adults as in children. *Diabetologia* 2004; 47: 377-84.

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

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

51. Lagerkvist BJ, Bernard A, Blomberg A, Bergström E, Forsberg B, Karp K, Segerstedt B, Nordberg G. Pulmonary epidthelial integrity in children – relationship to ambient ozone exposure and swimming pool attendance. *Environ Health Perspect* 2004; 112: 1768-71.

52. Lind T, Lönnerdal B, Stenlund H, Gamayanti IL, Ismail D, Seswandhana R, Persson LÅ. A community-based randomized controlled trial of iron and zinc supplementation in Indonesian infants: effects on growth and development. *Am J Clin Nutr* 2004; 80: 729-36.

53. Lind T, Hernell O, Lönnerdal B, Stenlund H, Domellöf M, Persson LÅ. Dietary iron intake is positively associated with hemoglobin concentration during infancy but not during the second year of life. *J Nutr* 2004; 134: 1064-70.

54. Lind T, Persson LÅ, Lönnerdal B, Stenlund H, Hernell O. Effects of weaning cereals with different phytate content on growth, development and morbidity: a randomized intervention trial in infants from 6 to 12 months of age. Acta Paediatr 2004; 93: 1575-82.

55. Lugalla J, Emmelin M, Mutembei A, Sima M, Kwesigabo G, Killewo J, Dahlgren L. Social, cultural and sexual behavioral determinants of observed decline in HIV infection trends: lessons from the Kagera Region, Tanzania. *Soc Sci Med* 2004; 59: 185-98.

56. Lugina H, Nyström L, Lindmark G. Assessing mothers' concerns in the postpartum period: methodological issues. *J Adv Nurs* 2004: 48: 279-290.

57. Marklund M, Stenlund H, Franklin K. Mandibular advancement devices in 630 men and women with obstructive sleep apnea and snoring. Tolerablity and predictors of treatment success. *Chest* 2004; 125: 1270-8.

58. Mejàre I, Stenlund H, Zelezny-Holmlund. Caries incidence and lesion progression from adolescence to young adulthood: a prospective 15-year cohort study in Sweden. *Caries Res* 2004; 38: 130-41.

59. Mogren I, Pohjanen A. Low back pain and pelvic pain during pregnancy - prevalence and risk factors in a Swedish cohort. *Spine*. Accepted.

60. Mogren I. Previous physical activity decreases the risk of low back pain and pelvic pain during pregnancy. *Scand J Public Health.* In press.

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

62. Månsdotter A, Lindholm L, Öhman A. Women, men and public health – how the choice of normative theory affects resource allocation. *Health Policy* 2004; 69: 351-64.

63. Nordin P, Lindström Å, Lappas G, Maesel J, Krantz I. "Kontaktgrad" - alternativ ansats att belysa behov av sjukvård. (Degree of contact – an alternative of measuring need for health care) *Läkartidningen* 2004; 101: 2485-88.

64. Nordström, A., Kullgren, G. & Dahlgren, L. Scizophrenia and crime: The experience of parents. *International Journal of Law and Psychiatry*. Accepted.

65. Novak D, Lindholm L, Jonsson M, Karlsson R. A Swedish cost-effective analysis of community-based Chlamydia trachomatis PCR testing of postal urine specimen obtained at home. *Scand J Public Health* 2004; 32: 324-32.

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

67. Nystedt A, Högberg U, Lundman B. The negative birth experience of prolonged labour. A case referent study. *J Clin Nursing*. In press.

68. Otterblad Olausson P, Spetz CL, Rosén M. Stor användning av registerdata i svensk forskning – en nordisk konkurrensfördel. *Norsk Epidemiologi* 2004;14:125-8.

69. Pakkanen M, Lindblom B, Otterblad Olausson P, Rosén M. Stora regionala skillnader i förlossningsvårdens resultat. *Läkartidningen*. 2004; 101: 3320-25.

70. Panday S, Reddy SP, Ruiter RAC, Bergström E, de Vries H. Determinants of smoking cessation among adolescents in South Africa. *Health Education Res*. In press.

71. Petersson LG, Twetman S, Dahlgren H, Norlund A, Holm AK, Nordenram G, Lagerlöf F, Söder B, Källestål C, Mejare I, Axelsson S, Lingström P. Professional fluoride varnish treatment for caries control: a systematic review of clinical trials. *Acta Odontol Scand* 2004; 62: 170-6.

72. Petruskiene V, Falk M, Waernbaum I, Norberg M, Eriksson JW. The Risk for Venous Thromboembolism is Markedly Elevated in Diabetes Patients. *Diabetologia*. In press.

73. Pommer L, Fick J, Andersson B, Sundell J, Nilsson C, Sjöström M, Stenberg B. Separation of helthy and sick buildings in the Swedish office illness study by principal component analysis. *Indoor Air* 2004; 14: 16-23.

74. Poggensee G, Krantz I, Nordin P, Mtwewe S, Ahlberg B, Mosha G, Freudenthal S. A six-year follow-up of schoolchildren for urinary and intestinal schistosomiasis and intestinal helminth infection in Northern Tanzania. *Acc Acta Tropica* Nov 2004.

75. Rasmussen S, Abildström SZ, Rosén M, Madsen M. Trends in short-term and long-term prognosis after acute myocardial infarction in Denmark and Sweden: comparison of outcome measures based on national administrative databases. *J Clin Epidemiol* 2004; 57: 638-46.

76. Ringbäck Weitoft G, Hjern A, Rosén M. School's out! Why earlier among children of lone parents? *Scand J Social Welfare* 2004; 13: 134-44.

77. Ringbäck Weitoft G, Burström B, Rosén M. Premature mortality among lone fathers and childless men. *Soc Sci Med* 2004; 59: 1449-59.

78. Rolandsson O, Marklund AL, Norberg M, Ågren Å, Hägg E. Hemoglobin A1c can be analyzed in blood kept frozen at -80°c and is not commonly affected by hemolysis in the general population. *Metabolism*, 2004; 53: 1496-9.

79. Rosén M, Haglund B. From healthy to sick survivors. Implications for the 21st century. *Scand J Public Health.* In press.

80. Rosén M, Lindblom B, Otterblad Olausson P, Pakkanen M. Slutreplik: Öppna jämförelser leder till ytterligare förbättringar. *Läkartidningen* 2004; 1001: 3616.

81. Rönmark, E, Andersson C, Nyström L, Forsberg B, Järvholm B, Lundbäck B. Obesity increases the risk of incident asthma among adults. *Eur Respir J* 2005; 25: 282-88.

82. San Sebastian M, Hurtig AK. Oil exploitation in the Amazon basin of Ecuador: a public health emergency. *Pan American J Public Health* 2004; 15: 205-11.

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

84. San Sebastián M, Hurtig AK. From NAFTA to FTAA? The impact of deregulation of trade on social and health conditions of people of the Americas. *Pan American J Public Health* 2004; 16: 272-8.

85. San Sebastián M, Hurtig AK. Cancer among indigenous people in the Amazon basin of Ecuador, 1985–2000. *Pan American J Public Health* 2004; 16: 328-33.

86. Schaufelberger M, Swedberg K, Köster M, Rosén M. Decreasing one-year mortality and hospitalisation rates for heart failure in Sweden. Data from the Swedish hospital discharge registry 1988 to 2000. *Eur Heart J* 2004; 25: 300-7.

87. Schölin A, Björklund L, Borg H, Arnqvist H, Björk E, Blohmé G, Bolinder J, Eriksson JW, Gudbjörnsdottir S, Nyström L, Östman J, Karlsson AF, Sundkvist G. Islet antibodies and remaining β-cell function 8 years after diagnosis of diabetes in young adults: a prospective follow-up of the nationwide Diabetes Incidence Study in Sweden. *J Intern Med* 2004; 255: 384-91.

88. Schölin A, Törni C Nyström L, Berne C, Arnqvist H, Blohmé G, Bolinder J, Eriksson JW, Kockum I, Landin-Olsson M, Östman J, Karlsson FA, Sundkvist G, Björk E. Normal weight promotes remission and low number of islet antibodies prolong the duration of remission in Type 1 diabetes. *Diabetes Med* 2004; 21: 447-55.

89. Solomon P, Öhman A, Miller P. A follow-up study of career choice and professional socialization of physiotherapists. *Canadian Physiotherapy* 2004; 56: 102-110.

90. Sundström P, Svenningsson A, Nyström L, Forsgren L. Clinical characteristics of multiple sclerosis in Västerbotten County in northern Sweden. *J Neurol Neurosurg Psychiatry* 2004; 75: 711-6.

91. Sundström P, Juto P, Wadell G, Hallmans G, Svenningsson A, Nyström L, Dillner J, Forsgren L. An altered immune response to Epstein-Barr virus in multiple sclerosis. A prospective study. *Neurology* 2004; 62: 2277-82.

92. Söderberg S, Zimmet P, Tuomilehto J, De Courten M, Dowse GK, Chitson P, Stenlund H, Bareeboo H, Alberti KGMM, Shaw J. High incidence of type 2 diabetes and increasing conversion rates from impaired fasting glucose and impaired glucose tolerance to diabetes in Mauritius. *J Intern Med* 2004; 256: 37-47.

93. Söderberg S, Stegmayr B, Stenlund H, Sjöstrom LG, Ågren A, Johansson L, Weinehall L, Olsson T. Leptin, but not adiponectin, predicts stroke in males. *J Intern Med* 2004; 256: 128-36.

94. Söderberg S, Zimmet P, Tuomilehto J, de Courten M, Dowse GK, Chitson P, Stenlund H, Gareeboo H, Alberti KG, Shaw J. High incidence of type 2 diabetes and increasing conversion rates from impaired fasting glucose and impaired glucose tolerance to diabetes in Mauritius. *J Intern Med* 2004; 256: 37-47.

95. Talbäck M, Rosén M, Stenbeck M, Dickman PW. Cancer patient survival in Sweden at the

beginning of the third millennium - predictions using period analysis. *Cancer Causes Control*. 2004; 15: 967-76.

96. Talbäck M, Stenbeck M, Rosén M. Up-to-date long-term survival of cancer patients – an evaluation of period analysis on Swedish Cancer Registry data. *Eur J Cancer* 2004; 40: 1361-72.

97. Thanh NX, Hang HM, Chuc NTK, Byass P, Lindholm L. Does poverty lead to non-fatal uintentional injuries in rural Vietnam? *Injury Control Safety Promotion* (accepted).

98. Thögersen AM, Söderberg S, Jansson JH, Dahlen G, Boman K, Nilsson TK, Lindahl B, Weinehall L, Stenlund H, Lundberg V, Johnson O, Ahren B, Hallmans G. Interactions between fibrinolysis, lipoproteins and leptin related to a first myocardial infarction. *Eur J Cardiovasc Prev Rehabil* 2004; 11: 33-40.

99. Torén K, Gislason T, Omenaas E, Jögi R, Forsberg B, Nyström L, Olin A-C, Svanes C, Janson C, on behalf of the RHINE study group. A prospective study of asthma incidence and its predictors: the RHINE study. *Eur Respir J* 2004; 24: 942-6.

100. Twetman S, Petersson L, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, Lingström P, Mejare I, Nordenram G, Norlund A, Söder B. Caries-preventive effect of sodium fluoride mouthrinses: a systematic review of controlled clinical trials. *Acta Odontol Scand* 2004; 62: 223-30.

101. Uttjek M, Dufåker M, Nygren L and Stenberg B. Determinants of quality of life in a psoriasis population in northern Sweden. *Acta Dermatovenerol* 2004; 84: 37-43.

102. Wall S, Janlert U. The World Health Report 2003: conveying new insights while refurbishing old ideas. *Scand J Public Health.* 2004; 32: 1-2.

103. Valladares E, Peña R, Persson LÅ, Högberg U. Violence against pregnant women: prevalence and characteristics. A population-based study in Nicaragua. *BJOG*. In press.

104. Warensjö E, Jansson JH, Berglund L, Boman K, Ahren B, Weinehall L, Lindahl B, Hallmans G, Vessby B. Estimated intake of milk fat is negatively associated with cardiovascular risk factors and does not increase the risk of a first acute myocardial infarction. A prospective case-control study. *Br J Nutr* 2004; 91: 635-42.

105. Westerling R, Janlert U. Åttio socialmedicinska år. *Socialmedicinsk tidskrift* 2004; 81: 196-201.

106. Åberg K, Öhman A, Lundin-Olsson L. Disparata yrkesfunktioner och ett okänt team – uppfattningar från äldreomsorgen. *Nordisk Fysioterapi* 2004; 8: 3-11.

107. Öhman A, Solomon P, Finch E. Attitudes toward the profession and development of professional identity during physiotherapy education. *Adv Physiother*. In press.

Books and other publications

108. Appel, M & Bergenheim, Å "Reflekterande forskarhandledning. En bok om samarbetet mellan handledare och doktorand", Studentlitteratur 2005.

109. Bergström E, Hernell O. Obesity and insulin resistance in children and adolescents. In: Preventive Nutrition: The Comprehensive Guide for Health Professionals, Third Edition. A Bendich and RJ Deckelbaum (eds), Humana Press Inc, Totowa, New Jersey, 2004.

110. Chikovore J. Gender power dynamics in sexual and reproductive health. A qualitative study in Chiredzi District, Zimbabwe. 2004. Umeå University Medical Dissertations New Series No 876.

111. Dahlgren L, Emmelin M, Winkvist A. Qualitative methodology for international public health. Epidemiology and Public Health Sciences, Umeå University, 2004.

112. Dahlgren, L. & Starrin, B. Emotioner i vardagsliv och samhälle – en introduktion till emotionssociologin, Liber, Sthlm, 2004.

113. Edin KE. Intervjuer med terapeuter som möter våldsbenägna män (II Mäns makt och vanmakt, pp. 25-26) Konferens 1/04. Nationellt seminarium om mansforskning 11-12 mars 2003. Report published by Swedish Secretariat for Gender Research, Göteborg University 2004, Editor Siri Reuterstrand (ISSN 1404-4781).

114. Edlund C. Regionala skillnader i försörjningskostnad I: Socialförsäkringsstämman 2003 Försäkringskassornas Förbund, Riksförsäkringsverket Stockholm, 2004

115. Edlund, C m fl Regionala analyser av försäkringskonsumtion. En jämförelse mellan de fyra nordligaste länen och Kronobergs län, Försäkringskassornas Förbund, Stockholm, 2004.

116. Emmelin M. Self-rated health in public health evaluation. 2004. Umeå University Medical Dissertations New Series No 884.

117. Goine H, Edlund C. Välfärdssystemen kommunicerar! I Socialförsäkringen – ett system i upplösning? Rapport från forskarseminariet i Umeå januari 2004. Försäkringskassornas Förbund, Stockholm, 2004.

118. Hang HM. Epidemiology of unintentional injuries in rural Vietnam. 2004. Umeå University Medical Dissertations New Series No 914.

119. Hernell O, Forsberg G, Hammarström ML, Hammarström S; Ivarsson A. Celiac disease: Effect of weaning on disease risk. Nestlé Nutrition Workshops (in press).

120. Högberg U. Barnet och badvattnet – från bekämpande av mödradöd till familje-BB och tidig hemgång. I Svensk kvinnosjukvård under ett sekel 1904-2004 (red B Lindberg), s 109-124.

121. Ivarsson A. Celiac disease – is there a dietary prevention? In: Stern M, ed. Proceedings of the 18th meeting of the Working group on Prolamin Analysis and Toxicity, Stockholm 2-5 October 2003. Zwickaue: Verlag Wissenschaftliche Scripten, 2004. pp.165-171.

122. Ivarsson A, Hernell O. On the Multifactorial Aetiology of Coeliac Disease. In: Hernell O, Schmitz J, eds. Feeding during late infancy and early childhood. Annales Nestlé (in press).

123. Ivarsson A. The Swedish epidemic of coeliac disease explored using an epidemiological approach – some lessons to be learnt. In: Mulder C, Cellier C. Coeliac disease. Best practice & research - Clinical Gastroenterology (in press).

124. Källestål C, Hedin A. Kunskapsbaserat folkhälsoarbete, del 2. Handbok för sammanställning av kunskapsöversikter från originaluppsatser om interventioner inom folkhälsoområdet. Stockholm. Statens folkhälsoinstitut 2004:9.

125. Lind T. Iron and zinc in infancy: Results from experimental trials in Sweden and Indonesia. 2004. Umeå University Medical Dissertations New Series No 887.

126. Löfgren C, Georgsson Inger, Lindholm L. Ekonomisk uppföljning av Holmsunds-projektet. 2004-09-15.

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

128. Månsson A, Lindholm L. Hälsa och kön i normativ hälsoekonomisk analys. I: Hälso-ekonomi för folkhälsoarbete – introduktion och debatt. Kommande rapport från Statens Folkhälsoinstitut.

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

130. Sahlén K-G, Löfgren C, Lindholm L. Utvärdering av Nordmalingsprojektet. Rapport till Folkhälsoinstitutet 2004.

131. Sahlén K-G, Löfgren C, Lindholm L En kostnadsnyttoanalys av förebyggande hembesök i Nordmaling. Rapport till Folkhälsoinstitutet 2005.

132. Sri Hartini Th N. Food habits, dietary intake and nutritional status during economic crisis among pregnant women in Central Java, Indonesia. 2004. Umeå University Medical Dissertations New Series No 885.

133. Statens beredning för medicinsk utvärdering. Måttligt förhöjt blodtryck. Rapport nr 170/1 2004. Lars Lindholm medlem i projektgrupp.

134. Öhman A. Genuskodade kroppsideal i hälso- och sjukvården. I: Medicinsk genusforskning – teori- och begreppsutveckling: Vetenskapsrådets rapportserie 2004: 2

135. Öhman A. Genus i vårdens organisationer.In: Hovelius B, Johansson E. (red.) Kropp och genus i medicinen. Lund; Studentlitteratur: 2004.

136. Öhman A. Genuskodade kroppsideal i häslo- och sjukvården. In: Hovelius B, Johansson E. (red.) Kropp och genus i medicinen.Lund; Studentlitteratur: 2004.

Submitted articles

137. Ali M, Asefaw T, Byass P, Beyene H, Pedersen FK. Reducing childhood mortality in northern Ethiopia: a community-based intervention trial.

138. Dahlblom K, Peña R, Herrera RA, Dahlgren L. Home alone – children as caretakers in León, Nicaragua.

139. Edin KE, Dahlgren L, Högberg U, Lalos A. Intimate partner violence-spoken and unspoken professional discourses.

140. 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.

141. Emmelin M, Weinehall L, Stenlund S, Wall S, Dahlgren L. To be seen, confirmed and involved - a ten year follow-up of perceived health and cardiovascular risk factors in a Swedish community intervention programme.

142. Enberg B, Stenlund H, Öhman A. Work satisfaction, career preferences and unpaid household work among recently graduated healthcare professionals.

143. Eriksson N, Stenberg B. Baseline prevalence of symptoms typical of non-specific environmental syndroms n the Swedish population.

144. Hansen A, Edlund C & Dahlgren L. Experiences within the process of sick leave.

145. Herrera A, Dahlblom K, Dahlgren L, Kullgren G. Pathways to suicidal behaviour among adolescent girls in Nicaragua.

146. Nils M. Eriksson, Berndt GT. Stenberg. Baseline prevalence of symptoms typical of non-specific environmental syndromes in the Swedish population.

147. Fjelddahl A, Källestål C. A four-year cohort study of caries development and its risk factors in adolescents with high and low risk at baseline.

148. Fjelddahl A, Källestål C. Evaluation of preventive methods. A four year clinical study of Swedish adolescents.

149. Färnkvist L, Weinehall L. Impact of intervention intensity on process and outcome in a local cardiovascular disease prevention program in Sweden 1988-1995.

150. Goine H, Edlund C, Knutsson A. Welfare systems: communicating vessels? – regional differences in cost of labour-market benefits, sick leave and social assistance.

151. Gustafsson M, Ekholm J, Öhman A. A constant struggle – "A constant struggle" – successful strategies of women in work despite fibromyalgia. A qualitative study six-to-eight years after rehabilitation.

152. Hagberg L, Lindholm L. Cost-effectiveness of physical activity in health care.

153. Hang HM, Bach TT, Byass P. Unintentional injuries over one year in a rural Vietnamese community: describing an iceberg.

154. Jerdén L, Lindholm L, Weinehall L. The cost-effectiveness of different ways to distribute a client-held health record.

155. Jerdén L, Hillervik C, Hansson AC, Weinehall L. The spirit is willing, but the structure is weak. Experiences of Swedish community health nurses after the introduction of a patient-held health record.

156. Johansson E, Winkvist A, Dahlgren L Trust in modern medicine in Vietnam: Grounded Theory encounters Gidden's structuration theory.

157. K:son Blomquist H, Frängsmyr A, Hernell O, Stenberg B, Bäck O. Dietary intake of vitamin D during the second half of infancy in Swedish infants.

158. Källestål C, Dahlgren L, Stenlund H. Oral health behaviour and self-esteem over four years in Swedish adolescents.

159. Lindholm L, Löfroth E, Rosén M. Does a societal perspective in CUA guarantee health or welfare maximization?

160. Löfroth E, Lindholm L, Wilhelmsen L, Rosén M. Optimising health care within given budgets: primary prevention of cardiovascular disease in different regions of Sweden.

161. Mogren I. BMI and other determinants of long-term outcome for women with low back pain and pelvic pain during pregnancy.

162. Månsdotter A, Lindholm L, Winkvist A. Paternity leave in Sweden – an analysis of costs, savings and health gains.

163. Månsdotter A, Lindholm L, Lundberg M. Health, wealth and justice based on gender: a survey about the support for various ethical principles.

164. Månsdotter A, Lindholm L, Lundberg M, Winkvist A, Öhman A. Parental share in public and domestic spheres – a population study on gender equality, death and sickness.

165. Nawi N, Minh HV, Tesfaye F, Bonita R, Byass P, Stenlund H, Weinehall L, Wall S. Combining risk factor and demographic surveillance – potentials of WHO STEPS and INDEPTH methodologies for assessing epidemiologic transition.

166. Ngamvithayapong J, Winkvist A, Diwan VK. "Love" and "Let it be" – the dilemma of tuberculosis and HIV/AIDS control.

167. Norberg M, Eriksson JW, Lindahl B, Andersson C, Rolandsson O, Stenlund H, Weinehall L. IFG can Replace IGT in Screening for Prediabetes: a Swedish Prospective Population-based Case-control Study.

168. Norberg M, Stenlund H, Lindahl B, Andersson C, Weinehall L, Hallmans G, Eriksson JW. Factor analysis of the metabolic syndrome and adipose-derived mediators as risk markers for the development of type 2 diabetes: a prospective population-based case-referent study from Sweden.

169. Nordström A, Dahlgren L & Kullgren G. Victim relations and factors triggering homicides committed by offenders with schizophrenia.

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

171. Nurdiati DS, Stenlund H, Hakimi M, Wulff M, Winkvist A, Högberg U. Prolonged waiting time to pregnancy in rural Indonesia: an unperceived public health problem?

172. Nyrén M, Lindberg M, Stenberg B, Svensson M, Svensson Å, Meding B. Does childhood eczema influence a person's future working life?

173. Sandström M, Hörnsten R, Kalezic N, Lyskov E, Stenberg B, Wiklund U. Physiological examination? Laboratory tests and 24 hours ECG

monitoring on subjects with sick building syndrome.

174. Shaheen R, Lindholm L. Quality of life among pregnant women with Chronic Energy deficiency in Bangladesh.

175. Stenberg B, Sjöberg B and Bergström E. Characteristics and prognosis of symptoms among children in a water damaged school building.

176. Stenlund H, Lindholm L. Folkhälso-interventioner – osäkert beslutsfattande. Kommande rapport från Statens Folkhälsoinstitut.

177. Talbäck M, Eliasson M, Rosén M. Trends in survival of diabetics in Sweden between 1980 and 1999, improved survival for women, but not for men..

178. Thanh NX, Hang HM, Chuc NTK, Emmelin A, Lindholm L. Does the "injury poverty trap" exists?

179. Thanh NX, Löfgren C, Chuc NTK, Emmelin A, Lindholm L People's Preferences for Health Care Financing Systems: A Choice Experiment in Rural Vietnam

180. Tillberg A, Berglund A, Mårell L, Bergdahl J, Eriksson N, Lindén G, Stenberg B, WidmanL. Medical prognosis for patients with symptoms allegedly caused by dental restorative materials.

181. Twetman S, Petersson LG, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, Mejàre I, Nordenram G; Norlund A, Söder B. Caries-preventive effect of sodium fluoride mouthrinses: as systematic review of controlled clinical trials.

182. Törnberg S, Kenneth L, Svane G, Rosén M, Stenbeck M, Nyström L. Long-term attendance rate in a cohort aged 40-60 years at first invitation to the service-screening program with mammography in Stockholm county, Sweden.

183. Utarini A, Nyström L, Soedarso GW, Chandramohan D. Malaria morbidity trends in the Jepara District, Central Java, Indonesia 1980-1999.

184. Utarini A, Chandramohan D, Nyström L. Performance and role of active and passive case detection systems in Jepara District, Indonesia.

185. Uttjek M, Dufåker M, Nygren L and Stenberg B. Psoriasis Care Consumption and Expectations from a Gender Perspective in a Psoriasis Population in Northern Sweden.

186. Waldau S, Lindholm L, Svensson O. Political decision making on priorities and implementation in Swedish health care – challenges and possibilities.

187. Winkvist A, Ellsberg M, Hakimi M, Hayati EN. Effect of domestic violence on maternal nutrition and reproduction: evidence from studies in Indonesia and Nicaragua.

188. Öhman A, Hägg K, Dahlgren L. A stimulating, practicebased job facing increased stress – clinical supervisors' perceptions of professional role, physiotherapy education and the status of the profession.

189. Öhman A. Qualitative methodology for rehabilitation research.

Doctoral Theses 1987-2004

Rosén M. Epidemiology in planning for health: with special reference to regional epidemiology and the use of health registers. 1987. Umeå University Medical Dissertation New Series No 188.

Sandström A. Epidemiology at a smeltery: Changing patterns concerning occurrence, work environment, smoking and risk perceptions over six decades. 1992. Umeå University Medical Dissertation New Series No 353.

Shamebo D. Epidemiology for public health research and action in a developing society: the Butajira Rural Health Project in Ethiopia [Eds Wall S, Freij L, Muhe L, Sandström A]. 1992. Umeå University Medical Dissertation New Series No 360.

Brännström I. Community participation and social patterning in cardiovascular disease intervention. 1993. Umeå University Medical Dissertation New Series No 383.

Muhe L. Child health and acute respiratory infections in Ethiopia: Epidemiology for prevention and control. 1994. Umeå University Medical Dissertations New Series No 420.

Killewo J. Epidemiology towards the control of HIV infection in Tanzania with special reference to the Kagera region. 1994. Umeå University Medical Dissertations New Series No 421.

Stenberg B. Office illness: The worker, the work and the workplace. 1994. Umeå University Medical Dissertations New Series No 399.

Bergström E. Cardiovascular risk indicators in adolescents: the Umeå Youth study. 1995. Umeå University Medical Dissertations New Series No 448.

Lindholm L. Health economic evaluation of community-based cardiovascular disease prevention: Some theoretical aspects and empirical results. 1996. Umeå University Medical Dissertations New Series No 449.

Wulff M. Reproductive hazards in an industrial setting: An epidemiological assessment. 1996. Umeå University Medical Dissertations New Series No 489.

Barnekow Bergkvist M. Physical capacity, physical activity and health: A population based fitness study of adolescents with an 18 year follow-up. 1997. Umeå University Medical Dissertations New Series No 494.

Forsberg B. Urban air quality and indicators of respiratory problems. 1997. Umeå University Medical Dissertations New Series No 522.

Weinehall L. Partnership for health: On the role of primary health care in a community intervention programme. 1997. Umeå University Medical Dissertations New Series No 531.

Ibrahim MM. Child health in Somalia: An epidemiological assessment in rural communities during a pre-war period. 1998. Umeå University Medical Dissertations New Series No 557.

Peña R. Infant mortality in transitional Nicaragua. 1999. Umeå University Medical Dissertations New Series No 618.

Mogren I. Reproductive factors' impact on the health of mother and offspring - An epidemiological study. 1999. Umeå University Medical Dissertations New Series No 633.

Zelaya E. Adolescent pregnancies in Nicaragua. The importance of education. 1999. Umeå University Medical Dissertations New Series No 639.

Ellsberg MC. Candies in hell: Research and action on domestic violence against women in Nicaragua. 2000. Umeå University Medical Dissertations New Series No 670.

Johansson E. Emerging perspectives on tuberculosis and gender in Vietnam. 2000. Umeå University Medical Dissertations New Series No 675.

Nyström L. Assessment of population screening: the case of mammography. 2000. Umeå University Medical Dissertations New Series No 678.

Berhane Y. Women's health and reproductive outcome in rural Ethiopia. 2000. Umeå University Medical Dissertations New Series No 674.

Andersson T. Survival of mothers and their offspring in 19th century Sweden and contemporary rural Ethiopia. 2000. Umeå University Medical Dissertations New Series No 684.

Edlund C. Långtidssjukskrivna och deras medaktörer: en studie om sjukskrivning och rehabilitering. 2001. Umeå University Medical Dissertations New Series No 711.

Kwesigabo G. Trends in HIV infection in the Kagera region of Tanzania. 2001. Umeå University Medical Dissertations New Series No 710.

Öhman A. Profession on the move. Changing conditions and gendered development in physiotherapy. 2001. Umeå University Medical Dissertations New Series No 730.

Ivarsson A. On the multifactorial etiology of celiac disease. An epidemiological approach to the Swedish epidemic. 2001. Umeå University Medical Dissertations New Series No 739.

Grönblom-Lundström L. Rehabilitation in light of different theories of health. Outcome for patients with low-back complaints - a theoretical discussion. 2001. Umeå University Medical Dissertations New Series No 760.

Nurdiati D. Nutrition and reproductive health in Central Java, Indonesia. An epidemiological approach. 2001. Umeå University Medical Dissertations New Series No 757.

Hyder SM Z. Anemia and iron deficiency in women. Impact of iron supplementation during pregnancy in rural Bangladesh. 2002. Umeå University Medical Dissertations New Series No 783.

Utarini A. Evaluation of the user-provider interface in malaria control programme: The case of Jepara district, Central Java province, Indonesia. 2002. Umeå University Medical Dissertations New Series No 805.

Ringbäck Weitoft G. Lone parenting, socioeconomic conditions and severe ill-health. Longitudinal register-based studies. 2003. Umeå University Medical Dissertations New Series No 828.

Chikovore J. Gender power dynamics in sexual and reproductive health. A qualitative study in Chiredzi District, Zimbabwe. 2004. Umeå University Medical Dissertations New Series No 876.

Sri Hartini Th N. Food habits, dietary intake and nutritional status during economic crisis among pregnant women in Central Java, Indonesia. 2004. Umeå University Medical Dissertations New Series No 885.

Emmelin M. Self-rated health in public health evaluation. 2004. Umeå University Medical Dissertations New Series No 884.

Lind T. Iron and zinc in infancy: Results from experimental trials in Sweden and Indonesia. 2004. Umeå University Medical Dissertations New Series No 887.

Hang HM. Epidemiology of unintentional injuries in rural Vietnam. 2004. Umeå University Medical Dissertations New Series No 914.

Licentiate Theses 1994-2004

Abdulaziz Sharif Aden. Studies for health planning in rural Somalia:Community perceptions and epidemiological data. Licentiate thesis. Umeå University 1994.

Maymuna Muhiddin Omar. Women's health in rural Somalia. Licentiate thesis. Umeå University 1994.

Dinh Phoung Hoa. Social patterning of child health in Vietnam. Licentiate thesis. Umeå University 1996.

Hoang Thi Hoa. Family planning and reproductive pattern in rural Vietnam. A study during a period of rapid socio-economic transition. Licentiate thesis. Umeå University 1996.

Ngo Van Toan. Utilisation of reproductive health services in two rural areas in Vietnam. Licentiate thesis. Umeå University 1996.

Elmer Zelaya. Teenage sexuality and reproduction in Nicaragua: Gender and social differences. Licentiate thesis. Umeå University 1996.

Mary Ellsberg. Candies in hell: Domestic violence against women in Nicaragua. Licentiate thesis. Umeå University 1997.

Anna Fjelddahl. Evaluation of caries prevention - a four year longitudinal study in Swedish adolescents. Licentiate thesis. Umeå University 2001.

Kerstin Hultén. Diet and breast cancer - an epidemiological study on plasma biomarkers of dietary intake. Licentiate thesis. Umeå University 2001.

Th. Ninuk Sri Hartini. Dietary intake and nutritional status during economic crisis: the case of pregnant women in Central Java Indonesia. Licentiate thesis. Umeå University 2002.

Jeremiah Chikovore. Gender power dynamics in women´s reproductive health: A study of male perspectives in women´s reproductive health with special emphasis on abortion. Licentiate thesis. Umeå University 2002.

Nils Oscarson. Costs and cost-effectiveness of different caries-preventive measures in youth dental care in Sweden. Licentiate thesis. Umeå University 2003.

Public Health Report Series

2004:1 Maria Demetriou. Well-being of rural elderly people living in a sparsely populated region of Cyprus. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:2 Elli Nur Hayati. "Mom, why don´t you just look for a new good daddy?" Women´s lived experience and decision to leave an abusive marriage in Yogyakarta, Indonesia. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:3 Anwarul Iqbal. Childhood mortality due to drowning in rural Matlab, Bangladesh: Describing and proposing intervention. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:4 Pinky Jha. Trafficking of women and girls - a public health concern in Nepal. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:5 Flora Kilapilo. Mothers experience of infant crying during postpartum - study protocol. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:6 Alexander Kudryavtsev. Motivation for narcotic drug use in young adults: a Sweden-Russia cross-national comparison - protocol for a study. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:7 Ramoteme Lesly Mamabolo. Prevalence and determinants of under- and overnutrition in three-year old children of the central region of the Limpopo Province, South Africa. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:8 Melchizedek Malile. Monitoring water quality in a rural area in southern Sudan. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:9 Maksim Mily. Application of drug formulary for optimization of pharmaceuticals´ financing, accessibility, and utilization in hospital setting in Belarus. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:10 Nguyen Quynh Hoa. Drug use and health seeking behaviour for child illness in Vietnam - a qualitative study in Hanoi city and Bavi district. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:11 Katrina Nordyke. Vitamin AD supplement usage in infants with immigrant parent(s) - a case-referent study in northern Sweden. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:12 Lijun Shen. Cadmium effects on sex hormone level in male workers. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of

Public Health and Clinical Medicine, Umeå University, 2004.

2004:13 Hoang Thi Phuong. Child injury in rural area of Viet Nam - identifying causes and risk factors leading to child injuries in Ba Vi, Ha Tay. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:14 Zhao Qi. The knowledge and attitudes on tuberculosis among chronic cough patients in rural Jiangsu Province, China. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:15 Stephen Martin. A case-cohort study to investigate concomitant outbreaks of campylobacter and gastroenteritis, in Söderhamn, Sweden, 2002-03. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:16 Zainonisa Petersen. The visible woman. Smoking and possibilities for transparency in the nurse-patient relationship - a study of pregnant South African Women. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:17 Kari Övre. Life style and hand eczema. A cross-sectional study among secondary school students in Sweden. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:18 Columba Kokusiima. Postpartum experiences of first time fathers - A protocol for a study in Tanzania. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:19 Ari Probandari. Nutrition intervention among children 12-24 months of age in malaria endemic area in Papua, Indonesia. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:20 Tsevelmaa Baatar. Knowledge, attitude and practice of Mongolian family doctors regarding cardiovascular disease prevention. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:21 Felicia Berkun. Targeting child malnutrition in developing countries: Examining the etiology of the problem and the possibilities for improvement. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:22 Abrar Baig. Vaccination coverage for oral polio vaccination and identifying the determinants associated with popular participation in immunization activities of the polio eradication programme in Pakistan. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:23 Modise Johnson Mogotsi. Quality Of Life in a Mental Health context: an Occupational Therapy perspective. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:24 Viktoria Tevlina. Attitude to public health problems and future occupation among social work students in north-west Russia. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:25 Birgitta Edin-Westman. HKB – Från vilja till handling. Utvärdering av Hälsokonsekvensbeskrivningar (Hkb) inför beslut i kommunala nämnder i Örnsköldsvik. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:26 Maria Leonteva. Coping strategies in alcohol abstainers – a comparison between Arkhangelsk oblast and the country of Västerbotten. Study protocol. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

2004:27 Mayvor Ström. Sjuksköterskans uppfattning av sitt arbete som telefonrådgivare i Sjukvårdsrådgivningen; en fenomenografisk studie. Master thesis in public health. Umeå International School of Public Health, Epidemiology and Public Health Sciences, dept of Public Health and Clinical Medicine, Umeå University, 2004.

MFS-reports

No 32, 2004. Anna Hollander o Anna Tillman. Measles: disease and immunization – a study on knowledge and attitudes among Vietnamese parents.

No 33, 2004. Anders Fytagoridis o Jonas Frodlund. Risk factors for pneumonia among children at Baca Ortiz Childrens Hospital, Quito.

No 34, 2004. Carl Lipcsey o Per Löfvenberg. School health promotion and school drop-out in León, Nicaragua.

Nr 35, 2004. Kristina Rasmark o Ágota Magyar. The way from home delivery to hospital delivery in Butajira.

Nr 36, 2004. Jenny Sandberg. Prevention of mother-to-child transmission of HIV/AIDS at Malamulo Hospital, Malawi.

Nr 37, 2005. Stina Åkefeldt. "Our lives, our culture did not use to be like this"Indigenous views on oil extraction in Ecuador's Amazon – a qualitative study".

Nr 38, 2005. Magnus Svensson o Carl Aronsson. Observations and outcome of a nutritional pilot study in three secondary schools of Cameroon.

Umeå International School of Public Health

Epidemiology and Public Health Sciences

Department of Public Health and Clinical Medicine

Umeå University

SE-901 85 Umeå, Sweden

Phone: +46 90 785 27 69
Fax: +46 90 13 89 77

www.umu.se/phmed/epidemi