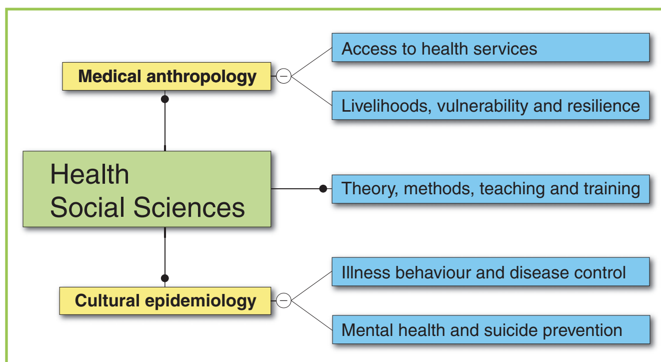
Introduction

Growth, development and strategic planning in public health and epidemiology have stimulated restructuring of the Health Social Sciences unit at the STI over the last 2 years. With enhanced links to medical anthropology in the Institute of Social Anthropology at the University of Basel and further innovation in cultural epidemiology, our current structure makes the scope of institutional priorities more explicit. These priorities encompass complementary and overlapping interests of social and cultural contexts of health, and determinants of illness behaviour for effective disease control. Medical anthropology is an independent field of inquiry and has long been a focal interest of our research. It is also an essential feature of the formulation of cultural epidemiology innovated by the STI. Links with other units in the Department of Public Health and Epidemiology and with other departments of the STI highlight the importance of relating questions of society and culture to the classical interests of public health.



Structure of the Health Social Sciences unit.

1. Medical anthropology

Access to health services

Research in medical anthropology has developed a more comprehensive concept of access for more effective health systems and interventions. A new conceptual framework links public health research and social science with broader development approaches to alleviating poverty. The aim of the ACCESS project is to validate this framework, showing how it helps to explain and improve access to prompt and effective malaria treatment and care in rural Tanzania (see section 8, Interventions and Health Systems).

The Health Access Livelihood Framework, on which our work is based, combines health service and health-seeking approaches and situates access to health care in the context of livelihood insecurity. Our health service studies identify determinants that influence various dimensions of access, such as availability, affordability, adequacy and acceptability. The project aims to reduce supply barriers and to improve the delivery of services, including availability of health facilities, equipment and qualified staff; staff skills; protocols of diagnosis; treatment; and quality of care. Health-seeking studies investigate why, when and how individuals, social groups and communities seek access to health care. The studies identify cultural and social barriers to appropriate use of health services and show how to remove barriers on the demand side.

Children in the Kilombero valley, Tanzania. (Photo M. Hetzel)

The new framework argues that neither the health service nor the help-seeking approach gives sufficient attention to the livelihood context of access to health care. Studies of malaria and HIV/AIDS in the context of livelihood insecurity demonstrate the difficulties people face in mobilising and transforming household and community assets that will enable them to gain access to health services. New interventions target individuals, social groups and communities; emphasise solidarity and empowerment; and link malaria interventions with micro-credit and income-generation schemes. A first example is an intervention focusing on women's groups within the ACCESS project.

Scientists: B. Obrist, C. Lengeler, C. Pfeiffer, M. Tanner, M.G. Weiss, J. Zinsstag
Students: A. Dillip, K. Gross, M. Hetzel, I. Mayumana
Collaboration: Ifakara Health Institute (H. Mshinda, F. Kessy); Institute of Social Anthropology, University of Basel (T. Förster, P. van Eeuwijk); ACCESS Project (A. Schulze); Interdisciplinary Monitoring Project for Artemisinin-based Combination Therapy in Tanzania (IMPACT) (P. Kachur)
Funding: Novartis Foundation for Sustainable Development

Livelihood, vulnerability and resilience

Research on access to health services is part of a larger interest in medical anthropology to examine the potential and limitations of the sustainable livelihood framework developed by the UK Department for International Development (DfID) for studying the links between health, poverty and development. This work aims to comple-

ment classical epidemiological considerations of risk with social science interest in vulnerability and resilience. Most of this research has been carried out within the NCCR North-South (see section 11 Human and Animal Health), and it is the focus of an NCCR transversal project, "Social vulnerability and resilience".

The vulnerability approach examines not only people's exposure to measured and perceived health risk but also the lack of means to successfully prevent or treat diseases like AIDS, malaria and TB. The resilience approach emphasises both reactive capabilities of people to cope with, recover from and adjust to various health risks and adversities, and their proactive capacity to create options and anticipate responses to health risks and adversity. State and private organisations can enhance resilience at the household and community levels by improving infrastructure and providing services and goods.

A livelihood context in the Kilombero valley. (Photo K. Gross)

Urban health

Research on vulnerability and resilience in urban areas has been carried out on malaria, HIV/AIDS and water- and sanitation-related health risks. In Abidjan, malaria is a well-known health risk called *palu* (from the French "paludisme"). However, *palu* not only refers to a specific disease caused by *Plasmodium* species. Local usage of the term also refers to general vulnerability from living in a harsh urban environment. Antimalarials in the form of local remedies and pharmaceutical pills are consumed to alleviate this malaise, resulting in inappropriate treatment and unnecessary cost.

Projects in Ouagadougou (Burkina Faso), Mopti (Mali) and Abidjan (Côte d'Ivoire) have examined what individuals and communities know and do to prevent, treat and live with HIV/AIDS, and how the disease influences gender and generational relations. The project in Ouagadougou found that young women are likely to be blamed for spreading the disease, which increases their social vulnerability. In Mopti, new businesses of dubious quality are proliferating, and trust has become a focal concern of resilience-building initiatives. The research in Abidjan studied a self-help group of women living with AIDS and found that only the leaders and a few members actually benefit from activities of the association.

A study carried out in collaboration with the Ifakara Health Institute (IHI) and Sandec (the Department of Sanitation in Developing Countries at the Swiss Federal Institute of Technology, ETH) in a neglected area of Dodoma, Tanzania, identified sanitation-related vulnerability as a priority issue. Not only are local residents exposed to health threats from livelihood insecurity, they also lack means to overcome them. To strengthen resilience to sanitation-related health problems, the project supports a local non-governmenal organisation (NGO) specialising in water and sanitation issues (MAMADO) in a partnership that focuses on social learning.

Mobility and migration

While many studies have examined whether migration increases vulnerability, migrants' access to and use of diverse resources constitute a research topic of growing interest. Current studies of our research group are concerned with reproductive health, transnational networks and positive notions of health among migrants from sub-Saharan Africa. Studies have been carried out within research programmes of the Swiss Federal Office of Public Health and within projects reaching out to migrant communities.

Research on the health of the elderly in increasingly mobile societies is of high interest in medical anthropology. The STI is collaborating with the Institute of Social Anthropology at the University of Basel in a new project that is investigating the impact of the health transition on the elderly in rural and urban Tanzania and the distressing uncertainties that confront them. The project considers social actors who are exposed to particular risks but who can also mobilise resources that may prevent, mitigate or overcome undesirable outcomes.

Scientists: B. Obrist, R. Henley, C. Pfeiffer, M. Tanner, M.G. Weiss, K. Wyss, J. Zinsstag

Students: Y. Adams, I. Bischofberger, S. Büchi, S. Dongus, S. Granado, K. Gross, S. Merten, P. Schwärzler, N. Steuer, M. Stuelb

Collaboration: Sandec, EAWAG, Dübendorf (C. Zurbrügg, C. Lüthi); Centre for Development and Environment, University of Bern (M. Cassel-Gintz); Centre Suisse de Recherche Scientifique, Abidjan, Côte d'Ivoire (G. Cissé, B. Koné, C. Kablan, D. Kouassi, A.S. Kouadio, M. Ould Taleb); Centre de Support en Santé Internationale, N'Djaména, Chad (A.N. Laoubaou); Centro de Investigación para el Desarrollo, Universidad Mayor de San Andrés, La Paz, Bolivia (L. Salamanca); Development Study Group, Geographisches Institut der Universität Zürich (U. Geiser); Ifakara

Health Institute (H. Mshinda, F. Kessy); Institut für Geographie, Friedrich-Alexander-Universität, Erlangen-Nürnberg (F. Krüger); Institut Universitaire d'Etudes du Développement (F. Nathan, I. Milbert); Natural Resources Institute, University of Greenwich at Medway, England (T. Cannon); South Bank University, London (T. Harpham); Sustainable Development Policy Institute, Islamabad, Pakistan (K. Siegmann, I. Maqsood)

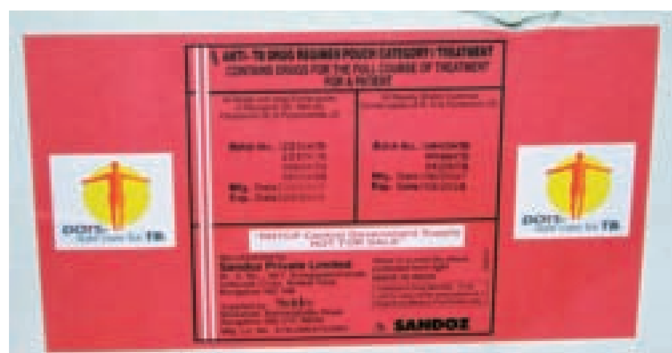
Funding: Swiss National Science Foundation (SNSF); Swiss Agency for Development and Cooperation; Federal Office of Public Health; Commission for Research Partnerships with Developing Countries (KFPE)

2. Cultural epidemiology

Illness, behaviour and disease control

The practical interests of cultural epidemiology focus on questions of how the experience and meaning of illness relate to disease control through effects on behaviour affecting risk and response to disease. Such interests have been developed in studies of high-profile infectious diseases, neglected tropical diseases and chronic diseases. Much of this work also relates to a broader thematic interest in the practical effects of stigma and gender, and their impact on illness-related experience, meaning and behaviour affecting disease control.

Findings from a four-country study of tuberculosis and gender, which the STI has been guiding for WHO/TDR (World Health Organization Special Programme for Research and Training in Tropical Diseases), have recently been summarised in a special section of the *International Journal of Tuberculosis and Lung Disease,* including cross-site analyses of the cultural epidemiology in Bangladesh, India, Malawi and Colombia; determinants of stigma; and sociocultural factors that influence delay to diagnosis and initiation of treatment. Experience from these studies has led to the development of current plans for a new study of the determinants of multidrug-resistant (MDR)-TB in Mumbai. This study – developed in partnership with the Foundation for Medical Research, Mumbai, in the context of a Swiss-India bilateral research initiative – considers the relative roles of biological strain types, health system factors and sociocultural influences on help seeking and adherence that may account for increasing MDR-TB in western India. A comparable framework guides another study of problem delay in initiating and adhering to antiretroviral treatment (ART) in South Africa with particular attention to the determinants and impact of stigma. That research has also been developed in a partnership with the University of Witwatersrand School of Public Health (WITS) in the context of a Swiss-South Africa bilateral research initiative. Other HIV/AIDS research examines illness concepts, cultural values and access to services in Jordan.



TB control requires assured access to an adequate supply of drugs and a commitment to use them effectively. (Photo M.G. Weiss)

Another study developed in the context of partnership with WITS has examined sociocultural features of chronic disease control, considering risk-related lifestyles and disease management behaviour for type 2 diabetes mellitus. The project was undertaken in the rural Mpumalanga province of South Africa, in the region of the Agincourt Health and Demographic Surveillance System.

Rural site of a collaborative study led by Carol Vlassoff that examines changing patterns of demographics and women's health in a village of Maharashtra, India. (Photo M.G. Weiss)

A study of leprosy in India analysed epidemiological trends in Tamil Nadu. It also examined the perceived status of control among various stakeholders, including patients, health staff and programme personnel from local to state and global levels. The leprosy research was undertaken in a partnership with the National Institute of Epidemiology, Chennai.

The group has begun a community-based vaccine research study, in collaboration with WHO, of sociocultural determinants of acceptance of an oral cholera vaccine in Zanzibar. Additional new studies of neglected tropical diseases include examination of sociocultural determinants of effective control of Buruli ulcer in Ghana, focusing on both risk-related and treatment behaviour and on health system factors locally and at higher levels.

Scientists: B. Obrist, P. Vounatsou, M.G. Weiss
Technician: D. Gosoniu
Students: M. Ackumey, A. Alkaiyat, L. Gujjarappa, E. Hürlimann, T. Jäggi, C. Schätti, E. Stamhuis
Collaboration: BRAC, Bangladesh (F. Karim); Centro Internacional de Entrenamiento e Investigaciones Medi-

cas (CIDEIM), Colombia (N. Arias); Equi-TB Knowledge Project, Malawi (J. Kemp); Foundation for Medical Research and Foundation for Research in Community Health (N. Mistry, S. Atre); National Institute of Epidemiology (ICMR) (M. Gupte, V. Kumaraswami, P. Manickam, P. Kaur); Karolinska Institutet Department of Public Health Sciences (V.K. Diwan); Tuberculosis Research Centre, Chennai (S. Jawahar); Stop TB/WHO (M. Uplekar); University of Ghana School of Public Health (M. Pappoe); University of Ottawa Institute of Population Health (C. Vlassoff); University of WITS (S. Fonn); Global Task Force on Cholera Control (C. Chaignat); WHO Department of Immunization, Vaccination and Biologicals (R. Hutubessy, V. Monti); WHO/TDR (J. Sommerfeld)

Funding: Indo-Swiss Bilateral Research Initiative; KFPE; Leprosy Relief Emmaus, Switzerland; SNSF; Swiss Federal Office of Home Affairs; WHO/TDR; WHO Department of Immunization, Vaccination and Biologicals

External partners: ICMR; Ministry of Health, Jordan; Ministry of Health and Family Welfare, Zanzibar

Mental health and suicide prevention

Mental health and cultural psychiatry are enduring interests that also highlight the relationship between population health and clinical practice. Our research focuses on suicide, community mental health, cultural psychiatry and epilepsy. Social and cultural determinants of suicide and suicidal behaviour consider practical implications of different ways of explaining suicidality. Clinical studies of nonfatal deliberate self-harm and community studies of suicide, based on family survivor accounts, clarify particular features for prevention in clinical and community settings. Explaining the basis of suicidality locally has broader relevance in clarifying the nature of serious mental health problems apart from high-risk psychiatric disorders, and such research guides priority setting for community mental health beyond suicide prevention. Attention in the fields of cultural psychiatry and medical anthropology to the distinction between professional and local explanations of mental health problems has contributed to the development of explanatory model theory and cultural epidemiological research from their outset.

STI studies of suicide and deliberate self-harm in India have focused on patterns of underlying problems, causes and triggers of suicidal behaviour that constitute local explanations of suicide. Government and community interests concerned with pesticide poisoning and farmer suicides in the Sunderban region of West Bengal were examined in a rural study and doctoral research, described in the last biennial report. Further study in urban Mumbai has indicated characteristic themes and the distinctive features of gender-related factors, highlighting the role of domestic issues for women and livelihood issues for men. Alcohol and substance abuse by men were important factors for both men and women but in different ways. Region- and class-specific patterns of problems, causes and triggers indicate the value of local research to ascertain and address local priorities.

The research on suicide in Mumbai has developed an approach to sociocultural autopsy that shows the utility of studying relevant issues beyond high-risk psychiatric risk disorders to clarify features of mortality in health demographic surveillance. Research in a Mumbai slum has also examined the similarity and divergence of local explanations among survivors with a different relationship to an index suicide. Findings show that agreement in survivor accounts and the frequency of reported explanatory factors are different matters. As the table shows, case-specific agreement on contributing factors, indicated by the kappa statistic to correct for chance agreement, was relatively high for the role of alcohol and drugs. Contributing factors that were more frequently reported – such as desperation ("no way out"), self-directed anger and impulsivity – had lower levels of case-specific agreement, indicated by lower values of kappa. This suggests some explanations for suicide are culturally preferred generally, and others are more specific to cases.

A study of deliberate self-harm in Basel has also been completed. Findings support the hypothesis of cross-cultural differences and the relatively greater importance of a psychiatric history as a risk factor, which better explains suicidal behaviour in Switzerland compared with South Asia. A health survey of gay men in Geneva has considered interrelationships of suicidality, mental health and general health, as well as the broader health impact of stigma and gender.

Contributing factors reported by two survivors to explain suicide in a slum community of Mumbai.

Contributing factor	Total cases reported	Reported by both respondents	Reported by only one respondent	Fraction agreed	Kappa
Desperation, "no way out"	34	17	17	0.50	0.33
Self-directed anger	29	12	17	0.41	0.30
Impulsive act	24	8	16	0.33	0.28
Influence of alcohol	15	10	5	0.67	0.73
Prior indication of suicide	17	9	8	0.53	0.59

Data for 50 index cases of suicide with EMIC interview for sociocultural autopsy, 2 respondents for each case. Data source: Prof. S.R. Parkar, KEM Hospital and Seth GS Medical College, Mumbai.

New collaborations for the study of epilepsy and stigma in Benin, Kenya and Laos are looking into the practical implications of infectious, sociocultural and health system factors. The work in Kenya is particularly concerned with the magnitude and causes of the so-called treatment gap, indicating the number of people with epilepsy but without treatment or effective interventions. In Laos, a completed baseline epidemiological study is guiding the establishment of a national programme.

Collaboration and experience in both clinical and field-based mental health studies have motivated STI contributions to international symposia concerned with the role of culture in planning new diagnostic manuals for psychiatry and mental health. In that regard, cultural epidemiological studies offer the potential for empirical data to validate diagnostic categories across cultures and to identify practical implications for clinical management from a cultural formulation. Findings based on this approach also clarify the relationship between interests of clinical practitioners and policymakers concerned with the mental health of populations. Relevant symposia have been organised in meetings of the World Psychiatric Association, the Society for Study of Psychiatry and Culture, and the World Association of Cultural Psychiatry.

Scientists: B. Obrist, P. Odermatt, P. Vounatsou, M.G. Weiss
Technician: D. Gosoniu
Students: S. Banerjee, C.K. Mbuba, C. Sauerborn, J. Wang
Collaboration: Institut de la Francophonie pour la Médecine Tropicale (H. Barennes, M. Strobel); Institute of Neuroepidemiology and Tropical Neurology, Limoges (P. Preux); Institute of Psychiatry, Kolkata (A.N. Chowdhury); KEM Hospital and Seth GS Medical College, Mumbai (S.R. Parkar); KEMRI-Wellcome Trust, Kilifi, Kenya (C.R. Newton); Maharashtra Institute of Mental Health, Pune, India (M. Agashe, V. Paralikar); Psychiatrische Poliklinik, Universitätsspital Basel (A. Riecher-Rössler); Universitäts Psychiatrische Klinik, Basel (G. Stoppe); WHO, Department of Mental Health and Substance Abuse, Geneva (J. Bertolote)
Funding: Freiwillige Akademische Gesellschaft Basel; KEM Hospital Research Fund; Wellcome Trust; SNSF

3. Theory, methods, teaching and training

Research activities of the unit have continued to refine concepts and methods of medical anthropology and cultural epidemiology, and their application to practical concerns of public health, disease control and mental health. A seminar in medical anthropology and cultural epidemiology is regularly offered at the STI, and medical anthropology is a core topic in the undergraduate and postgraduate curricula of the Institute of Social Anthropology and in the MA programme of the Centre for African Studies. New institutional links have been created with medical anthropologists at the University of Dar es Salaam. The medical anthropology group plans to consolidate research around a focus on reproductive vulnerability and resilience, especially among women, youth and the elderly, migrants and mobile populations. This new focus strengthens links with the reproductive health group in the Swiss Centre for International Health.

A course at the STI teaches concepts and methods of cultural epidemiology, and training has also been provided at partner institutions through workshops and project support. Over the next biennium we anticipate further strengthening of training links in the bilateral Swiss-India and Swiss-South Africa research programmes. Cross-cutting interests in the health impact of stigma and gender remain a focus. Our group has also begun to innovate and validate cultural epidemiological approaches to vaccine acceptance, based on experience studying social and cultural factors affecting adherence. This work should have broad implications for other intervention studies, including clinical trials.

Fieldworkers and coordinator with GPS and map preparing for cholera vaccine study interviews in a village in Zanzibar. (Photo C. Schätti)

Collectively, the unit will continue to integrate these various health social science interests with other aspects of

EMIC interview for a cholera vaccine study in a village in Zanzibar. (Photo C. Schätti)

public health at the STI, and in our local and international collaborations.

Scientists: M. Blunier, A. Hoffmann, B. Obrist, C. Pfeiffer, M.G. Weiss

Collaboration: Centre for African Studies, University of Basel; Swiss Federal Institute of Technology, Lausanne; Indian Institute of Technology – Madras, Chennai (V. Muraleedharan); National Institute of Epidemiology (ICMR), Chennai; University of Dar es Salaam, Department of Sociology; University of Witwatersrand School of Public Health, Johannesburg

Funding: Indo-Swiss Bilateral Research Initiative (SNSF); KFPE; SNSF and National Research Foundation, South Africa

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