Team for Applied Research to Generate Effective Tools and Strategies for Communicable Disease Control: The TARGETS Consortium

LSHTM investigators: Helen Ayles, Virginia Bond, Sandy Cairncross, Ilona Carneiro, Daniel Chandramohan, Alexandra Coldham, Jonathan Cox, Petra, De Haas, Peter Godfrey-Faussett, Caroline Jones, Jo Lines, Karina Kielmann, Kim Mallard, Ruth McNerney, Dirk Mueller, John Porter, Mark Rowland, Clare Sullivan, Jayne Webster, Suzanne Welsh
Collaborators: Centre for Health Research and Development, Pune, India; Ifakara Health Research and Development Centre, Tanzania; INDEPTH Network of Demographic Surveillance Systems, Accra, Ghana; KNCV-Tuberculosis Foundation, The Hague, Netherlands; Makerere Medical College, and its Infectious Diseases Institute, Uganda; Swiss Tropical Institute, Basle ZAMBART, the Zambian AIDS-related Tuberculosis project, Lusaka, Zambia;
Funding bodies: DFID

Our purpose is to develop new knowledge, tools and approaches that lead to better health for the poor and vulnerable through more effective communicable disease control. Our focus is on the world's "killer diseases" and on overcoming the barriers to effective control of these diseases, an essential step towards achieving the Millennium Development Goals (MDGs).

The drive to achieve the MDGs, the availability of increased funding and the plethora of global initiatives targeting communicable diseases provide opportunities to scale-up key programmes, but impose challenges on over-stretched health systems. Particular challenges exist in complex emergencies and where states are weak, situations in which a high proportion of the disease burden occurs.

Within the changing context of health care implementation, we will identify the advantages and disadvantages of various strategies for scaling-up interventions, investigate the barriers to equitable access and large-scale coverage, and seek and test solutions to these constraints. To achieve this, we will build capacity and partnerships with public health policy makers and practitioners, for the generation and dissemination of practical knowledge and policy-relevant evidence on the development, appropriate adaptation and scaling-up of effective interventions.

We currently have a large number of international research projects in hand run by the multidisciplinary teams that have been built up by previous Knowledge Programme funding, recently on tuberculosis and malaria and previously on Tropical Disease Control and Environmental Health. Examples include the ZAMSTAR Project in which LSHTM and ZAMBART are major players, and the work on IPTi in Tanzania and Ghana.

Keywords: Scaling-up, dissemination, communicable disease, MDGs

LSHTM contact: Alexandra.Coldham@lshtm.ac.uk

The Intervention with Microfinance for AIDS and Gender Equity – IMAGE Study

LSHTM investigators: Paul Pronyk, John Porter, Julia Kim, Charlotte Watts, Linda Morison, Stephen Jan
Collaborators: Joanna Busza, Chris Bonell, Vicki Strange, Institute of Education; Rural AIDS & Development Action Research (RADAR) Programme; WITS University School of Public Health, SA; National Department of Health and Welfare, South Africa ; Small Enterprise Foundation (SEF)
Funding bodies: Ford Foundation, Swedish International Development Agency, HIVOS Netherlands, AngloPlatinum

The Intervention with Microfinance for AIDS & Gender Equity (IMAGE) is a structural intervention for HIV/AIDS that brings together two main components:

- A poverty -focused microfinance programme
- A curriculum of gender and HIV education with the aim of facilitating community mobilization activities

The Pilot Phase of this work (2001-2004) was developed to test the efficacy of the IMAGE intervention. Employing a cluster randomized design, the research brought together intensive qualitative and quantitative evaluation to examine the impact of the intervention on social, economic and behavioural vulnerability to HIV. The primary results of the trial were recently published in the Lancet, and demonstrated improvements in levels of poverty, the empowerment of women an a 55% reduction in levels of gender based violence.

A portfolio of ongoing research builds on the Pilot phase and has the following key components:

- Scaling up the intervention over a 2000 km2 area along a high-transmission area slated to become the largest platinum mining shelf in the southern hemisphere
- A full economic evaluation of the work is underway in partnership with the London School of Economics, including cost-effectiveness and cost-benefit analyses
- A Process Evaluation is nearing completion - a form of evaluation forming an important adjunct to randomized controlled trials that allows for a detailed explo ration of acceptability of an intervention, potential mechanisms of action, and the generalizabilty / replicability of the strategy to other countries and contexts.
- Finally, a substudy on the incremental effects of the economic development vs the educational component of the intervention is also underway.

Keywords: HIV/AIDS, Poverty Alleviation, Microfinance, Evaluation, South Africa

LSHTM contact: Paul.Pronyk@lshtm.ac.uk

Understanding the true burden of tuberculosis in a rural South African population

LSHTM investigators: Paul Pronyk
Collaborators: Kathleen Kahn, School of Public Health, University of the Witwatersrand; Harry Hausler, South African Department of Health
Funding bodies: DFID

This research will describe the incidence and prevalence of tuberculosis in a rural sub-district. The setting is a Demographic and Health Surveillance Site comprised of 20 villages and c. 60 000 people in South Africa's northeast. Methods employed include a survey of hospital record data on passive case finding, a single-pass active case finding survey of chronic coughers in 10 000 households, and a record of TB related deaths generated through the use of a verbal autopsy process. Data is being collected that will accurately describe the incidence of TB in a well-described population with a known denominator, the prevalence of sputum positive TB among undiagnosed active cases, and the incidence and prevalence of registered and unregistered TB deaths in the community – painting an accurate picture of the epidemiology of the disease in a high HIV prevalence setting.

Keywords: epidemiology, active case finding, verbal autopsy, South Africa

LSHTM contact: Paul.Pronyk@lshtm.ac.uk

Providing HIV/AIDS Care in under-resourced settings

LSHTM investigators: Paul Pronyk
Collaborators: Rural AIDS & Development Action Research Programme; School of Public Health, University of Witwatersrand; Perinatal HIV Research Unit, Johannesburg, South Africa (PHRU)
Funding bodies: USAID/PEPFAR

LSHTM is currently at the forefront of providing and evaluating comprehensive HIV/AIDS Care in resource poor settings through its work in Limpopo Province - a remote rural area of the country. The site builds on previous experience as a WHO ProTEST Site for TB/HIV collaboration. In partnership with South African colleagues at PHRU parallel patient cohorts (capturing more than 3000 patients) have been established at this site and at an urban site in Soweto - reflecting the vast contextual differences between urban township and rural areas that characterizes much of the southern African region.

A broad portfolio of research activities is emerging around the provision of comprehensive HIV/AIDS care, which includes the recent introduction of anti-retroviral therapy. These sites provide the opportunity to interrogate a number of clinical, social and health systems questions that arise within a rapidly evolving policy environment, where major gaps in capacity and programme implementation exist. Best practice models arising from the work have the potential to inform the scaling up of HIV services in much of the region.

Keywords: HIV/AIDS, South Africa, under resourced-settings

LSHTM contact: Paul.Pronyk@lshtm.ac.uk

Tuberculosis: An Additional Tipping Stress on Poor Households in South Africa and Zambia?

LSHTM investigators: Virginia Bond
Collaborators: IFPRI; The Desmond Tutu TB Centre (Faculty of Health Sciences, Stellenbosch Universit, SA); Anthropology Department, University of Cape Town; District Health Boards in Zambia and Western Cape
Funding bodies: RENEWAL, International Food Policy Research Institute (IFPRI)

This qualitative anthropological research study aims to investigate the converging impact of tuberculosis, food insecurity and HIV on poor households in one rural area in Zambia and one peri-urban area in South Africa. The study will assess the efficacy of food aid - and other forms of external welfare support - in reducing the converging impact of tuberculosis, food insecurity and HIV.

The research will work in Pemba / Batoka, Choma District, Zambia, and Mbekweni, Paarl Health District, Western Cape, SA - both sites that fall within a wider community clinical control trial (namely ZAMSTAR). The research study starts in March 2006 and finishes in August 2007. A range of qualitative methods will be used, including timelines, seasonal calendars, matrix ranking, wealth and well-being ranking and matrix scoring, semi-structured interviews, household questionnaires and anthropometric measurements of children aged 12 to 59 months.

The core hypothesis of the study is: Zambian and South African households have a limited capacity to cope with the trajectory of TB illness in the context of food insecurity and at this stage of the HIV epidemic without external welfare support. The analysis will look at how households combine, utilise, exploit and allocate these resources in response to TB illness, possible HIV/AIDS and food insecurity, and come up with what indicators constitute capability to cope – or not cope – with all three. We will assess the relative importance of different factors in coping with all three adversities, and the relative appropriateness of external support. It is anticipated that such a finely grained analysis of small numbers of households will allow a pattern to emerge in coping strategies (in relation to TB, food insecurity and HIV), and on the basis of this, allow us to develop a set of indicators that could be applied more rapidly and more broadly (i.e. not only by anthropologists but by a wider set of disciplines and stakeholders) in relation to TB and food insecurity (or wider poverty issues).

The research will be supervised by Virginia Bond and carried out by two African social scientists – one Zambian and one South African. The latter will use this opportunity to do a Masters by Dissertation within the Social Anthropology Department, University of Cape Town.

Keywords: food insecurity, HIV/AIDS, South Africa, Zambia

LSHTM contact: Virginia.Bond@lshtm.ac.uk

Action Research Unit in an urban area with a high prevalence of both HIV and *Mycobacterium tuberculosis*

LSHTM investigators: Helen Ayles, Peter Godfrey-Faussett, Ab Schaap
Collaborators: District Health Management Team – Dr M Makasa, Mr G Samungole, ZAMBART Project –Dr J Banda University of Zambia Medical School; University Teaching Hospital, Lusaka
Funding bodies: DFID

The Action Research Unit of Lusaka District management Team is established within the district headquarters and aims to bridge the gap between research and practice.

The key problem as identified by the Lusaka District Management Team is the high rate of sputum smear negative patients notified in the district. The first study undertaken by the ARU followed TB suspects at urban health centres in order to evaluate whether they were asked for sputum to be submitted and if so who gave them instructions and how they were followed.

Preliminary results demonstrate that a major barrier is a lack of sputum containers and further studies are underway to establish the reason for this, attitudes of staff towards sputum and its collection and also monitoring of the quality of received sputum samples.

Keywords: Action research, diagnostic process, adherence, Zambia

LSHTM contact: Helen.Ayles@lshtm.ac.uk

Understanding The Demand For Health Services In Cape Town, South Africa: Implications For Health Equity and Effective TB Care

LSHTM investigators: Anne Mills, Kara Hanson, Jolene Skordis
Collaborators: Andrew Boulle, School of Public Health at the University of Cape Town, South Africa Lucy Gilson, LSHTM and the University of the Witwatersrand, South Africa
Funding bodies: This investigation received financial support from the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR). Jolene Skordis was supported by a scholarship from the Commonwealth Trust.

1) Primary Aim
To understand the determinants of treatment seeking behaviour in Cape Town, South Africa, and examine whether the complex and dynamic determinants of treatment seeking behaviour observed through empirical research can be incorporated into and improve existing demand models. A secondary purpose of the research is to inform debates about how to improve people's effective use of health care (TB) services.

2) Introduction
Global interest in inequalities and meeting the needs of the poorest has yet to be translated into adequate local policy knowledge. Research on inequity in South Africa has thus far focused on health outcomes or service utilisation in rural populations, with findings dominated by insufficient health service supply. Models of health seeking behaviour and economic demand are traditionally constructed at the individual level, making little allowance for seeking as a social phenomenon, influenced by cultural norms and established familial or community habits. Barriers to access are usually presented as a list of mutually exclusive factors rather than an interdependent whole, where the relative importance of each barrier varies between individuals, communities and illness-experiences.

3)TB as a case study
TB/HIV co-infection is a global concern, and failure to effectively treat TB in poorer countries highlights global inequities in health. South Africa experiences some of the highest prevalence rates of both diseases. In the Western Cape, TB prevalence is rising faster than the rest of the country while cure rates are falling despite widespread and free provision of DOTS for TB. Literature from other settings ascribes poor cure rates to delays in seeking treatment, delays in diagnosis and failure to adhere to the treatment regime i.e. poor health seeking behaviour. Selecting a curable disease such as TB, which affects only the poorest groups in the Western Cape, enables the evaluation of social context on individual decision-making while controlling for supply factors. Supply in the Western Cape is relatively high, further enabling a detailed analysis of barriers posed by gender, stigma, socio-economic factors and poor service quality, while still considering service utilization and health outcomes.

Keywords: Demand, Health service use, Equity

LSHTM contact: Anne.Mills@lshtm.ac.uk

Counsellors' experiences and practices around HIV counselling and informed consent in research and VCTC settings in Pune city, India

LSHTM investigators: Karina Kielmann, John Porter
Collaborators: Anita Shankar, Johns Hopkins Bloomberg School of Public Health, Dept. of International Health; Sucheta Deshpande, Vinita Datye and Sheela Rangan of Centre for Health Research and Development (CHRD), Maharashtra Association of Anthropological Sciences (MAAS), Pune, India
Funding bodies: DFID

The Indian National AIDS Control Organisation (NACO) adopted WHO guidelines relating to HIV-testing in 2002. However, much of HIV-testing takes place in the private medical sector where practices of informed consent are rare and pre- and post- test counselling often inadequate (Sheikh et al in press, Kielmann et al, in press, Datye et al under review). Even in research and clinical settings where guidelines are in place, questions arise as to what patients really understand by informed consent and to what extent they can actively engage with the counselling on offer (Sastry et al 2004). Objectives of this study are to document the process of HIV counseling and informed consent in the VCTC and research settings in Pune city and to highlight challenges faced by counselors during HIV-counselling and obtaining informed consent. Indepth interviews are being conducted with eleven to twelve counsellors from research and VCTC settings. The interviews examine counsellors' perceptions and experiences with HIV-counselling, their communication practices and their understanding of the importance and feasibility of informed consent in the Indian cultural context. In particular, we focus on how consent is obtained, and adapted according to the local situation as well as counsellors' perceptions of patients' reactions and response to informed consent procedures.

Keywords: HIV testing, HIV counselling, ethics, informed consent, India

LSHTM contact: Karina.Kielmann@lshtm.ac.uk

Investigating Private Sector Delivery of Services for the Management of Adult HIV Patients in Pune, India

LSHTM investigators: Karina Kielmann, John Porter
Collaborators: Sheela Rangan, Kabir Sheikh, Deepali Deshmukh, Vinita Datye, Sucheta Deshpande, Saju Joseph, Solomon Salve, Suchitra Desai, Centre for Health Research and Development (CHRD), Maharashtra Association of Anthropological Sciences (MAAS), Pune, India; Ram Gambhir, Department of Anthropology, University of Pune
Funding bodies: DFID, WHO SEARO

A series of studies looking at the management of HIV within the private medical sector (private medical practitioners, private laboratories and private pharmacies) during the time period January 2002 and November 2003 in the city of Pune, and between March and November 2004 in three rural sub-district areas of Pune district located in Western Maharashtra, India. The objectives of the studies were to document current practices of private health care providers in the diagnosis and management of HIV patients, to identify factors influencing provider decision-making in the management of HIV patients and to describe the social, economic and health policy contexts within which private providers make these decisions. The studies used a range of survey and qualitative mapping and interviewing techniques. Two-hundred and fifteen private practitioners, 36 private laboratory staff and 82 private pharmacy staff were included in the urban surveys; in addition, 27 private practitioners and 12 key informants with specialised knowledge on HIV were interviewed in-depth. In the rural component, 202 private practitioners, 13 private laboratory staff and 75 private pharmacy staff were included.

Most of the private medical providers are engaged in diagnosing HIV and large volumes of HIV testing are being undertaken in the private medical sector. Marginally more rural providers are testing and diagnosing HIV. One explanation for this could be the complete lack of access to HIV testing facilities in the public sector at the sub-district level. Routine HIV testing was found to be a common practice; most private laboratories perform rapid tests and the diagnosis of HIV is most often made on the basis of a single test. The norms for pre-test and post-test counselling, as mandated by the National AIDS Control Organization, are seldom adhered to in this setting. Provider perceptions of their clients' education, understanding and financial status influence communication and management practices,which are highly individualistic and characterised by uncertainty. The use of anti-retroviral therapy by physicians is limited, although anti-retroviral drugs are available in most pharmacies in urban as well as rural areas.

Keywords: private medical sector, HIV, management practices, India

LSHTM contact: Karina.Kielmann@lshtm.ac.uk

Understanding Quality of Care in the Revised National TB Control Programme (RNTCP) in India

LSHTM investigators: Karina Kielmann, John Porter
Collaborators: Sheela Rangan, Aarti Kelkar-Khambete, Anuprita Shukla, Sameer Pawar, Madhuri Mankar, Saju Joseph, Deepali Deshmukh, Vinita Datye, Abhay Kudale, Anagha Pradhan from Centre for Health Research and Development (CHRD), Maharashtra Association of Anthropological Sciences (MAAS), Pune, India
Vikas Inamdar from the City TB Control Society, Pimpri Chinchwad Municipal Corporation, Pune. Dilip Jagtap from the Pune City TB Control Society. Rajesh Singh from Garhwal Community Development and Welfare Society
Funding bodies: DfID, Target TB, Inter Aide

A series of studies looking at understanding the quality of the RNTCP, using access as a key indicator for quality. The first of these studies was undertaken between May and December 2004 in Pimpri Chinchwad Municipal Corporation in Pune district, an urban programme, which has been showing consistently good performance in terms of the case detection and outcome targets. It is also one of the first programmes to include private practitioners known to be the preferred provider for most patients, by making them DOT providers. The study interviewed 117 new sputum positive patients between one week and one month of treatment initiation in the RNTCP.

There is not much delay on the part of patients in seeking care for early symptoms of TB. Despite the knowledge of government health services, the majority of patients still prefer to seek help from the private sector. Delays in suspicion of TB and referral to the RNTCP are significantly less for patients seeking care from private practitioners collaborating with the RNTCP. Patients, whose per capita monthly income is 22 USD, spend about 20 USD prior to entry into the RNTCP on shopping for diagnosis and treatment. Once they enter the RNTCP diagnosis and treatment initiation are done without much delays. Access to Microscopy Centres in the RNTCP is a problem in terms of time and money spent by patients in reaching the centre, but access to DOT Centre is good, indicating that DOT has been decentralised in order to make it more convenient for patients. While the study found most patients lacking in knowledge and information about important aspects of TB diagnosis and treatment, patients indicated RNTCP staff behaviour to be rude and impolite.

Studies to further explore the issue of quality using access, in particular for the poor and vulnerable groups are planned in Pune city. In Mumbai, Inter Aide, a French agency, which is implementing a GFATM-funded Urban DOTS project, has requested help in designing and conducting a series of baseline studies to document access to the RNTCP, in particular to the poor and vulnerable groups in urban slums. Another study comparing the quality of care in NGO-run TB programmes with that of the RNTCP is planned in Dehradun district in the northern state of Uttaranchal. Provider studies to understand provider perceptions regarding quality are also planned in Pimpri Chinchwad Municipal Corporation.

Keywords: quality of care, access, treatment, India

LSHTM contact: Karina.Kielmann@lshtm.ac.uk

Policy