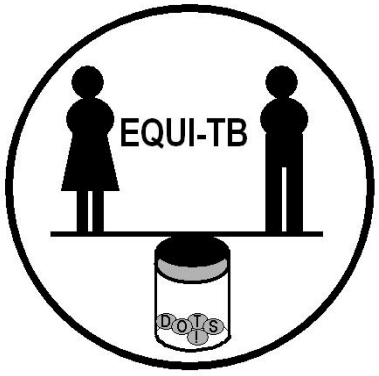
EQUI-TB Knowledge Programme

Quality Assured TB Care for Poor People in Resource Constrained Settings

Partners' Meeting Report

School of Public Health, Fudan University
SHANGHAI
NOV.13-17, 2003



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EXECUTIVE SUMMARY

REPORT ON 4th EQUI-TB KNOWLEDGE PROGRAMMEME PARTNERS MEETING: NOVEMBER 13-15, 2003 HELD AT JINGUO HOTEL, SHANGHAI

The EQUI-TB is a collaborative network set up in 2001 between Liverpool School of Tropical Medicine, University College London Medical School, China, Malawi and Zambia to exchange information, ideas and skills training in the field of tuberculosis.

The fourth collaborative meeting was held in Shanghai, China in November 2003 and allowed partners to share the outputs achieved to date and disseminate the results of the operational researches done in different partner sites, drafted year 4 work plans and discussed the EQUI-TB knowledge development, practices and experiences.

Many research activities have been conducted to spread EQUI-TB knowledge findings to health providers and vulnerable groups including rural people in poverty, prisoners and urban floating populations.

The programme has focused on improving the access to TB care for vulnerable populations, strengthening the capacity building among health providers in different levels of health care and providing information on equity in access to TB care for policy makers. Furthermore, broad and deep collaborations among the partner countries have been created since the initiation of the EQUI -TB programme.

EQUI - TB has continued working with national TB control programmes and developed collaborative research between partner countries. It is expected that in the fourth year of the programme, more effort will be put in to explore the risk factors of the poor access to TB care among vulnerable groups, and to promote implementation of pro-poor strategies, which enhance care and support for TB care among the poorest.

This report was prepared by the School of Public Health, Fudan University, Shanghai, China.

BACKGROUND INFORMATION

This meeting was the annual partners meeting of the network set up in 2001 between Liverpool School of Tropical Medicine, University College London Medical School, China, Malawi and Zambia to exchange information, ideas and skills training on tuberculosis.

China was privileged to host this meeting, which was the fourth, the previous three having been held at Liverpool, Malawi and Zambia. All the partners were represented. School of Public Health, Fudan University took the responsibility of organizing the meeting in Shanghai.

PARTNERS MEETING OBJECTIVES

1. **Allow partners to share highlights of outputs achieved to date** (Between Nov 2002 and Nov 2003)
2. **To review progress to date against year 3 work plans**
3. **To introduce the Vulnerability Framework and identify the priorities within a complex analysis for action**
4. **To brainstorm on how to ensure our research activities focus on the EQUI-TB purpose**
5. **To develop collaboration with regard to technical assistance among the EQUI - TB programme partners**
6. **To discuss the strengths and weaknesses of the research methodology used in the EQUI -TB programme**
7. **To find effective ways of disseminating the research findings to the policy makers**
8. **Dissemination plans**
9. **Research capacity building**

OUTPUTS

- Summaries of key outputs achieved
- Review of the ongoing studies and the current progress reports
- Considerations and ideas from the participants on the research methodology
- Feed back from the participants on the Vulnerability Framework
- Discussion between partners with regard to study design, investigation tool, data analysis methods and publication
- Agreement on preparing for the triennial review for mid term evaluation
- Communication on TB control activity through the field visit in a district TB dispensary in Shanghai

A total of 38 participants took part in this workshop (Annex 3), which was organized in form of group discussions, and presentations form each partner organization. There were poster presentations from each partner and these mainly outlined the out-puts achieved by the different partner organization (Annex 1).
The various partners gave country presentations and the important highlights of the different presentations are included in this report.

PARTNER PRESENTATIONS:

Each Partner gave a brief presentation of their recent work, focusing on new knowledge development, dissemination activities, capacity building and future activities.

ZAMBIA and UCL Update:

Dr. Soka Nyirenda (Dept of Medicine, UNZA-UCLMS, EQUI-TB Knowledge Programme) presented the results from the study on TB in prison. Dr. Jim Huggett (Centre for Infectious Diseases, UCL) gave an introduction about the advances in TB diagnosis. The Zambian side is now mainly concentrating on the TB in prison studies and the studies on improving TB diagnosis. They are also interested in developing the CD4 indicator for TB diagnosis in resource scarce area.

Activities to generate new knowledge

- VACSIS study looking at gene expression in TB patients and their contacts to identify factors characteristic with increased susceptibility to TB. The aim is to use this knowledge to direct vaccine trials but this can also be used for diagnostic purposes.
- A total of $1.8 million has been obtained and equipment from this grant is now being used for our poverty related TB research.
- TB in Prisons- Both the qualitative and clinical studies in prison staff have been completed with vital input from Liverpool and UCLMS. Insight into the prevalence of MDR TB in Zambian prisons has been gained and a pilot study has been completed by a sister project under Dr JC Mwansa.
- TB in prisoners- Having completed the TB in prison staff study, we have now focussed on the prisoners themselves. Collateral funding has been sourced from the MOH and all the laboratory component has in essence been funded-$20,000. This figure is likely to increase as money from the global funds will soon be disbursed
- Collaboration will be with UCLM, Liverpool and Malawi as we hope to train a social Scientist in Malawi- Money has been pledged by the CBOH.
- TB in Pregnancy studies- The protocol is now ready and ethics approval obtained. An application has already been put in through the global fund and it is hoped that this will be funded completely from the Zambian Government**. Professor Chintu to circulate the completed protocols to all partners**

Knowledge Disseminated: Recent publications

1. Mwaba P, Maboshe M, Chintu C,Squire B,Nyirenda S, Sunkutu R, Zumla A. The relentless spread of tuberculosis in Zambia: Trends over the past 37 years(1964-2000) S Afr Med J 2003 Feb; 93(2): 149-52
2. Mwaba P, Chintu C, Kasonka L Review of tuberculosis in pregnancy Zambia Med Journal Issue on reproductive health April 2003: 23-25
3. Mwaba P, Chintu C,Cassol S, Pilon R,Janes M,Nunn A, Zumla A. Use of dried whole blood spots for the quantification of HIV viral load in Zambian AIDS patients Zambia Med Journal Special issue on HIV June 2003:36-40
4. Peter Mwaba, Sharon Cassol, Rick Pilon, Chifumbe Chintu,MichelleJanes, Andrew Nunn, Alimuddin Zumla. Use of dried whole blood spots to measure CD4+

lymphocyte counts in HIV infected patients: The LANCET Vol 362. November 1 2003: 1459-1460
5. Chifumbe Chintu and Peter Mwaba Is there a role for chest radiography in identification of asymptomatic tuberculosis in HIV infected people? The LANCET Vol 362. November 8, 2003. 1516.
6. Several meetings attended in Paris, Canada, South Africa and USA on tuberculosis

Capacity development

- 4 technicians trained in simple and molecular diagnostics in tuberculosis.
- One social scientist in training and contributed to the TB in prisons study. It is hoped that she would be registered with Malawi-CBOH has assured us of sponsorship
- 4 Psychosocial counsellors trained and these will play a major role in the prisoners study
- 2 MMed students: One is looking at prevalence of TB in patients with short duration of cough less than 3 weeks while the other is looking at the isolation of AAFB in patients with chronic gastroenteritis- Confirmed CBOH funding.

Technical Assistance Policy

- EQUI-TB Zambia has members on the National TB working group as technical advisers and contributed to National TB guidelines
- Consultancy in the AIDS guidelines developments and formulation of training manuals
- Consultancy in the development of MDR diagnosis and treatment guidelines
- Consultancy in the trainers of trainers of community TB managers

The future

- Better placed than previous year and shall consolidate our collaboration with other members of EQU TB
- Multiplier funds are now a possibility
- **TB in pregnancy and prisoners a priority and protocols to be circulated to all partners**
- Studies in cheap diagnostics planned

Presentation: KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF TUBERCULOSIS AMONG PRISON STAFF IN LUSAKA –ZAMBIA

Objectives of the study

To ascertain the knowledge, attitudes and perceptions of tuberculosis among prison staff.

Justification

Staff are caregivers, hence the need to take care of them.

a) Knowledge, perception, attitude
b) Screen them for tuberculosis(Sister study)
   -at risk
   -potential reservoirs of TB

Methodology

Self-administered questionnaire;
120 given out, 103 received. 73 were used

10 FGD; based on officer ranks

Results

Age; 22 to 51 , mean age 36.6

8/73 officers were females(50% participation)

Education; 51.4%- Junior secondary school certificates, 20% up to Secondary school, 10% college or other. All ladies never went beyond primary school

Knowledge; 60%.

- 98% said TB is related to HIV but could not explain how
- Most know it is transmittable, treatable
- Attitude and perception;
- Risk of acquiring TB differed between 'open- air' and enclosed prisons.
- Predisposition; Poor living conditions are a breeding ground for tuberculosis.
- All are aware that TB is airborne
- Acquired through contact. However 'contact' included shaking hands, sharing eating utensils, sleeping in the same room etc.
- Majority thought the Administration should decongest cells to control spread of TB

Conclusions

- Knowledge of tuberculosis is 60% among staff.
- Staff are aware TB is a problem and needs to be controlled.

Recommendations

- More education needed about TB
- Management needs to liaise with officers to sort out the perceived danger of contracting TB
- Screen TB upon joining the service

Presentation: TB Diagnostics

Aims to:

- Identify the Pathogen
- Identify a host response

TB diagnostic research that identifies the pathogen:

- Improve current methods
- Develop new tests

Develop new tests:

Molecular diagnostic tests for tuberculosis

Molecular techniques have been developed for this purpose

The Dogma is still negative.

Poorly designed assays and bad procedures have given method like PCR a bad press.

"Cannot replace conventional testing"

While they are being used by some institutions to complement conventional techniques these techniques are still relatively rare and are not used in the developing world Cost, Expertise, Efficacy

An example from the Royal Free Hospital, London

TB diagnostics using SDA ~ £6.00 per test.

Pays for: Personnel, Reagent kit, Machine use, Royalties

Sensitivity and Specificity

Technique	Sensitivity	Specificity
PCR	97 %	99 %
SDA	95%	98%
TMA	98.4 %	98.9 %
LCR	90.4 %	98.5 %

Identify infectious agent
Competitor Assay Protocol (CAP), Simple PCR based diagnostic test with improved design and internal control requiring less expertise to assess test result
Samples; BAL, oral swabs (filter paper), blood, Urine

Identify host response
The problem of identifying the infectious agent is you can never be sure it is present in the test sample
When a host is infected with a pathogen there will be a physiological response.
The VACSIS project is investigating this response in TB patients and their contacts to identify gene expression patterns to direct new vaccine trials
This can also be used to diagnose the disease

Identify host response
Real time PCR can measure 1 gene at a time, so prior knowledge is required to assess potential target. There are ~30,000 genes in our cells of which 9,000-18,000 are switched on at any one time. We are currently undergoing a preliminary investigation to study all the gene expression changes that occur when an individual succumbs to tuberculosis infection

DNA arrays
Identify host response
Characterisation of the hosts gene expression using DNA arrays will provide us with a tremendous amount of information into tuberculosis infection. This information can lead to accurate simple field diagnostic tests that can use samples like blood to accurately identify patient infection

Plan for TB diagnostics
Procalcitonin is the pro form of the protein calcitonin. When an individual suffers septic shock this protein increases in serum
This is used in a simple test to diagnose sepsis in intensive care wards in Germany

LSTM Update:

The presentation was given by Dr. Andy Ramsay, LSTM, UK.

New Knowledge (NK), Dissemination, and Capacity Strengthening

- NK leading to improved accessibility of quality-assured TB care for poor and disadvantaged people.
- NK leading to approaches that will reduce the threat of multi-drug resistance
- New knowledge disseminated to key policy makers and opinion leaders.
- Strengthening research capacity

UPDATE SYMBOLS

- 🛏 - Completed
- ⏭ - Underway
- Ⓟ - Planning stage
- 🛌 - Not addressed yet

Improved accessibility – 1

- Research into mechanisms for reducing the time required to establish TB diagnoses for the poorest. ⏭Ⓟ
- Community-based prevalence surveys of TB and HIV in Malawi: poor/vulnerable vs more affluent. ⏭

Improved accessibility – 2

- Capturing knowledge outputs from TB pilot in Benue State, Nigeria. 🛏
- Social science and gender analysis input into the initial phase of a patient-centred approach to TB care in Burkina Faso and South Africa (INCO DEV AFDOT). 🛏
- Further development of collaborative work with IPSR, Mahidol University, Thailand. ⏭

Improved accessibility – 3

- Assessment of potential for collaborative work on TB in pastoral and other mobile or vulnerable groups. ⏭
- Economic growth/poverty reduction, TB control and TB prevalence. ⏭

Improved accessibility - 4

- Desk-based literature review on evaluation strategies for complex interventions in TB. 🛏 (supported by AFDOT)
- Policy analysis of TB control in different health systems. ⏭

Access: New developments - 1

- Gillian's work with WHO.
- Gillian's TDR grant.
- FIND grant for spt concentration.
- Spt concentration – Abuja
- Audit CRL Lilongwe
- Migrant workers in Mae Sot (Jean Clayton F/ship)
- EPZ workers, LSTM, Coats Plc, ITGLWF.

Access: New developments - 2

- In-Depth Proposal (Thailand) being reviewed. 'Developing pro-poor behaviour change strategies for TB prevention and treatment'.
- Systematic Review of evidence-base for traditional CDST lab methods.

Threat of MDRTB - 1

- Pharmacokinetic studies on absorption and distribution of first-line anti-TB drugs. Ⓟ
- Attendance at DOTS-Plus WG Meeting. 🛌

MDRTB – New developments

- LSTM and UCL to work on LAMP for diagnosis

Dissemination of NK - 1

- Development of 'TB and Poverty' Network for Action commissioned by STOP-TB. ⏭ (🛌)
- IUATLD conference – 2 symposia. 🛌
- CATA Conference, Chengdu. 🛌
- Partners meeting 2003. ⏭
- Outputs from vulnerability analysis of TB (MD Project / PPM group). 🛌

Dissemination – New developments

- CRL Audit – IJTLD 2003
- Bleach work, Ethiopia – 1 published, 1 submitted

Capacity strengthening

- Through LSTM taught courses. 🛌
- Through research / taught PG degree students at LSTM. 🛌⏭

MALAWI Update:

The presentation was given by Dr. Hastings Banda

Overview

- **Output 1.1 Improved accessibility of quality-assured TB care for poor and disadvantage**
- **Output 1.2 MDR study**
- **Output 2 & 3 New knowledge disseminated to key policy opinion leaders and strengthened research capacity**
- **Technical Policy Assistance**

Output 1.1 Improved accessibility of quality-assured TB care for poor and disadvantaged

Development of community based initiatives to improve access for the poor

- LHL funded an Extending Services to Communities Project in urban poor settings
- Encompass Intervention and research components
- Development of the intervention underway
- Linking civil society with TB care. Grant proposal has reached second and final round will be presented in December 2003
- Rural household study to assess delays in rural areas
- Will inform NTP to develop appropriate pro-poor strategies for rural areas.

Systematic analysis of poverty and tuberculosis

- Analysis undertaken and findings disseminated internationally
- TB and Poverty network proposed
- Developing analysis of equity in access to HIV/AIDS
- Mainstreaming of social science in the National Tuberculosis Programmeme
- Gender and Equity Focal Office established
- A Social Scientist recruited
- Feasibility study of including alternative/care providers in sputum collection in peri-urban Lilongwe
- Data analysis still pending

Output 1.2 A reduction in the threat of MDR TB

- MDR-TB study
- DOTS-plus pilot project
- Pharmacokinetics studies

Output 2&3 New Knowledge Disseminated to key policy and opinion leaders

- Call for advocacy from NTP
- Ex-TB patients network

Policy Technical Assistance

- Programmeme provided TA to partners in limited ways e.g NTP (Capacity strengthening) and CARE (Consultancy)
- No TOR's are available
- No Policy developed

CHINA Update:

The presentation was given by Dr. Xu Biao

I. Research projects:

Activity 1: Prof. Yan F and Prof. Gong' team:

- *"Social assessment of TB in Inner Mongolia". Prof. Yan F: qualitative study on TB patients and suspects pathway to seek health care*

Activity 2: Prof. Zhan SK's team

- WHO/TDR project " Comparison of three TB programmes in China, A case study in rural areas" has been carried out in Qingzhou, Jianhu and Funing Counties where different TB control programmes were implemented. A paper in English version is under preparing.
- Secondary data analysis, supported by LSTM "TB control in internal migrants" has been carried out in Minghang District and a paper in Chinese version is written for publication.

Activity 3: Prof. Gong & Chen CW, Wang YH' team

- "Analysis on the factors influencing TB changeable tendency". An existing data analysis to study the relationship between TB indicators of annual TB cases registered report and socioeconomic indicators

Activity 4: Prof. Jiang QW & Xu B's team

- "Equity in access to TB care in a transitional society – rural China"- WHO/TDR Substudy 1:A descriptive study on TB epidemiology and TB case management in counties with or without TB control programme, Jiangsu Province, China
- Substudy 2: Perceptions and Experiences on access to TB healthcare – A Qualitative Study in Rural Jiangsu Province, China.
- Substudy 3: A comparative study on access to TB diagnosis among 493 incident TB patients in counties with or without TB control programme in rural Jiangsu Province, China
- Substudy 4: Access to TB care -- What did the chronic cough patients experience on the way of health seeking: a cross-sectional study 1021 chronic cough subjects in rural Jiangsu Province
- Substudy 5: Study on Knowledge, Attitude and Behaviours of Tuberculosis Care among Medical Providers in Rural Jiangsu Province
- Substudy 6: Socioeconomic Determinants of Knowledge and Attitudes About Tuberculosis in Rural Jiangsu Province, China
- Substudy 7: A follow up study on patients burden for getting TB diagnosis and treatment in counties with or without TB control programme, Jiangsu Province

Activity 5: Prof. Jiang QW's team

- GIS analysis of TB registered rate in Guangdong and the whole China.
- Molecular epidemiologic study on MDRTB in Jiangsu Province.

II. Proposal development

Operational research funding:

- Prof. Jiang QW: Contactors investigation: its importance and effectiveness in improving case detection of TB in rural China.
- Prof. Gong YL & Yan F: Social assessment project

WHO/TDR/SEB Research Grants:

- Xu B & Prof. Jiang QW : Does Tuberculosis (TB) care reach the poor? -- Study of TB control programme in two counties in rural China.
- Prof. Zhan SK is one of the collaborators of Prof. Wang Y's project in Chongqing on "Access to TB care among the rural migrants in Chongqing, China"

National Science foundation:

- Prof. Xu B: Molecular epidemiology of tuberculosis (TB) transmission in rural China
-

Other funding: **Shanghai Science Committee:**

- Prof. Xu Biao: Study on management of TB care among migrants TB cases in Changning District, Shanghai
- Prof. Zhan SK: TB control in moving population in Minhang District

III. Knowledge development & Brainstorm

- February: Dr. Bertie Squire's Beijing, Tianjing & Chongqing mission
- April: Prof. Wang Y from Chongqing MU and Dr. Hu DY from Chongqing CDC visited SPH, Fudan University for further collaborations on TB research
- Brainstorms on proposal developments: meetings in SPH
- August: Dr. Rachael Fletcher's Shanghai mission
- November: 2003 CATA meeting - Symposium on TB and Poverty
  Prof. Zhan SK: Access and outcomes of for rural migrants with TB in Minhang District, Shanghai
  Prof. Yan F: Access to diagnosis in rural Inner Mongolia, China
  Prof. Xu B: Access to TB services in Jiangsu, China

IV. Collaboration Development between Partners

Prof. Zhan SK has been invited as the consultant in Malawi, and is developing the project on "National TB prevalence survey in Malawi" together with partners from LSTM and Malawi.

INTRODUCING THE VULNERABILITY FRAMEWORK:

KNOWLEDGE SESSION
Dr. Bertie Squire

Structure of presentation
Reminder of EQUI-TB purpose
What is vulnerability?
What is the vulnerability framework?
Strengths and Weaknesses

EQUI – TB's purpose is:
To promote implementation of pro - poor strategies, which enhance care and support for TB among the poorest

The fundamental problem with of DOTS – losing and not finding poor people

What is vulnerability?
A working definition: 'A set of factors associated with an individual or group that increases their probability of experiencing a reduction in well-being associated with infectious agents'

Vulnerability to what?
Aspects of vulnerability to communicable disease – vulnerability to
Exposure and infection
Progression to disease
Progression to severe disease
The effects of disease – suffering, death, social and economic effects

Individual level: biological and disease related factors: Age, sex, immunity, genetics, interactions with other diseases
Household and community levels: social and economic factors: Socio-economic status/poverty, nutritional status, livelihoods, gender, illness conceptualisation, education etc.
Meso/Macro levels: environmental and institutional factors: Physical/geographical, health services and policy, drug resistance, development policy etc.

Vulnerability to what?

Individual Level: biological/disease related factors	*Progression to disease* *Severe disease*
Household/community levels: socio-cultural and economic factors	*Exposure/infection,* *Severe disease,* *Effects of disease*
Meso/ Macro level: environmental and institutional factors	*Exposure/ infection,* *Severe disease,* *Effects of disease*

Poverty, social exclusion and gender equity by another name?
All prioritise theories of "the social production of health and illness "
The vulnerability framework aims to make this analysis explicit and to embrace a range of analytical lenses, such as poverty and gender analysis, which are sometimes applied in isolation

A 'bio-social' approach:
It also focuses on the biological factors, such as age, sex, genetics and immunity that influence which individuals are affected within these social fault lines i.e. we aim to take a 'bio-social' approach to answer the question:
"What are the precise mechanisms by which these diseases come to afflict some bodies but not others?" (Farmer, 1999)

Strengths
Holistic and multi-disciplinary approach provides a broad and inclusive framework
Promotes inter-disciplinary dialogue on ways of conceptualising vulnerability and communicable disease
Weaknesses
Potential to lose focus on what and where to prioritise - at which levels or on which factors should we focus our efforts in research, policy and practice?
Potential to lose explicit focus on social inequality and social justice in the context of a dominant bio-medical approach

Towards agency? From vulnerability to resilience
A 'social approach' emphasises focus on people's experiences and activities and the implications of these for their well-being, whilst a bio-medical approach focuses on disease related factors
Analysing vulnerability across diseases encourages efforts to identify common factors rendering people and communities vulnerable to different diseases

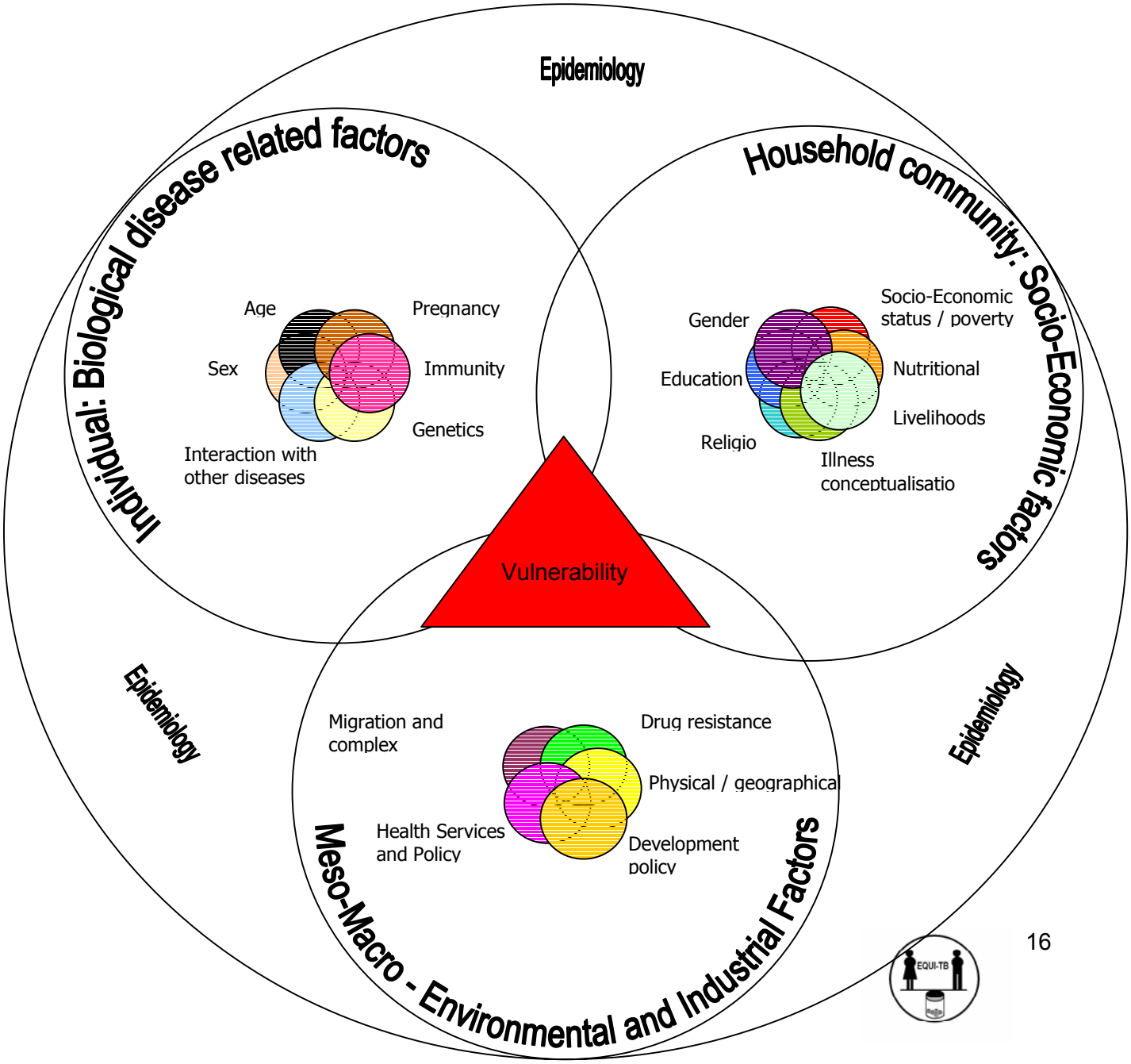
Why resilience?
A focus on how aspects of people's lives lead to vulnerability has implications for the type of interventions required to reduce vulnerability
Focus in disasters literature on 'protective factors', 'capacities' and 'capabilities' that make individuals and communities 'resilient'

Preliminary definition of resilience
'A set of factors associated with an individual or group that increases the probability that their well-being remains unaffected by hazards such as infectious agents' (e.g. malaria parasites, HIV or mycobacterium tuberculosis).

Promoting agency?
Many 'vulnerability' factors are related to powerlessness
Focusing on resilience and factors that increase well-being may offer opportunities to empower individuals and communities by enhancing their agency (i.e. ability to take decisions and act on them)

Questions arising from the framework
How to prioritise the most important issues within a complex analysis for action?
What are the critical linkages between factors that create a nexus of vulnerability for individuals and communities? Likely to be context specific?
What opportunities does participatory research and action offer to address issues of both complexity and agency? E.g. of PRSPs
What is the role of the health sector and health professionals in addressing the 'root causes' or 'determinants' of vulnerability?
How do we identify appropriate fast acting approaches without losing a focus on empowerment?

Some considerations from the participants:
1. Some factors in this framework are not easy to apply. So we need to found them develop indicators quantitatively and qualitatively
-- WHO new matrix network. This is not expected to be a monitoring tool.



GROUP DISCUSSION SESSION

Discussion 1: How can we ensure that our research activities focus on the EQUI-TB purpose?

China Group:
Currently we have several projects on TB in internal migrants conducted by different researches in SPH, Fudan University and SPH, Chongqing Medical University.
All focus on the problems of equity in relation to migrants: poverty and health insurance. There are some differences between projects: Shanghai- more developed; migrants from different areas; Chongqing: less developed; migrants are poorer. Researches on TB control in migrants covers barriers in different dimensions, individual, family, community and instructional in equity in access to TB care. Different projects may be focus at different levels. But there are common objectives such as case treatment and case management; TB control also closely linked to HSR. We should use all resources in communities against TB

Instructional cost recovery is causing problems for TB control: more cost and more barriers for patients.

Happy that government is paying more attention to these issue—more funding for migrants and swear negative cases. Government budget for community health in Shanghai has increased from 8-20 Yuan(RMB) per person.

Research in TB control should stimulate or promote instantly by government or capacity. E.g. methodology development, training of PhD Students.

Several projects on TB control in migrants—propose development of joint policy statements

Hope for more LSTM involvement.

Need more information exchange within university and between universities.
Use framework as a checklist or share + discuss research instruments between projects to enable comparable information.

Email network for reporting work or progress. 3 monthly meetings in SPH, Fudan University.

Questions and Answers:
1. Research on migration is a good idea. Is there any limitation or challenges?
--Problems (internal migrant TB) is severe but what we can do is just to show the problem, provoke the attention on this issue.
2. This topic is clearly in line with the ETKP purpose.
--It is fine to doing the research but very hard to practically implement.
3. Implementation policy

-- What we can do is writing papers, disseminate the findings and provide policy recommendations. Report and disseminate on the national conferences on TB organized by CATA and MOH once/twice a year.

Discussion 2: Vulnerability thinking in Malawi

Malawi group
General

- General discussion about future plans / activities (unrelated to vulnerability framework)
- Settled on existing work piloting food supplementation for TB patients in 4 districts (linked with World Food Programme)
- WFP / NTP work
- Addressing problem of mortality and treatment adherence
- Giving food supplementation (maize) to patients in hospital and then to family members for 9 months
- Decided we could add a component (qualitative assessment of the impact of food support on care seeking behaviour of family members
    - New patients
    - Retreatment patients
    - Previously cured patients

Whole new programme!

- Realised that food security was a major issue already emerging from our work (people choosing to eat or seek care) leading to
    - Poor nutrition
    - Delays in diagnosis
    - mortality
- Decided that Food supplementation could be a component of existing work being planned
    - Linking Civil Society to TB care (assessing potential role of food supplementation prior to diagnosis)
    - Antenatal Care TB case finding
    - GIS analysis of food security and TB cases

Reviewed Framework

- Assisted us in thinking about ways of delivering food supplementation and its possible impact:
    - Type of Maize?
    - Who to give it to?
    - Need to complement other food supplementation programme
    - Need to link to sustainability questions – development policy

Questions and Answers:

- In Zambia the situation is reverse. When patients taking treatment meanwhile with food supplementation; what will happen to them after they finish treatment without food supplement any longer?
- The issue is not whether mal-nutrition will lead to TB but shall we provide food supplement to encourage them treatment adherence.

Discussion 3: Vulnerability in the context of TB in prisons

ZAMBIA GROUP

HYPOTHESIS

- Prisoners are at risk of tuberculosis and MDR because of the poor living conditions
- The prisoners study is a pro-poor study

OBJECTIVES

1. To assess the prevalence, dynamics of TB transmission in the prisons in Lusaka, Zambia
2. To assess the knowledge, attitude and perceptions of prisoners of tuberculosis
3. To assess factors affecting access to health services

CONCEPTUAL FRAME WORK

1. Factors predisposing TB:

- Individual
- Nutrition
- Stress
- Institutional/structural factors
- Overcrowding
- Power structure
- Habitual offenders
- Duration in prison
- Age
- HIV and other infection
- Poor nutrition
- Prison policy
- Structure

2. ACCESS

INDIVIDUAL AND INSTITUTIONAL/SYSTEM FACTORS

- Number of staff at prison and clinic
- Attitude knowledge and perception of prisoner
- Attitude knowledge and perception of prisoner warder
- Transport to, distance to health provider and existing health facility
- Availability of drugs

METHODOLOGY

Qualitative study on perceptions, knowledge and attitude of prisoners staff

Qualitative assessment of:

- Perceptions, attitude and knowledge of prisoners
- Barriers to accessing care
- Dissemination of 1&2 to prison staff, home affairs, ministry of health
- Development of intervention to address the problems
- The Clinical study begins
- Prevalence of TB
- Transmission dynamics
- MDR TB
- Relationship with HIV, Syphilis, Hepatitis B and C

Questions and Answers:

1. Why this is a pro-poor project?
    - Prisoners are usually poorer ones who are vulnerable to developing TB.

2. Reverse situation of Malawi setting as MDR is not a problem in prison by access. Usually prisoners are diagnosed in prison.

3. Is it possible to produce evidence to support that this is pro-poor project within doing this? Also we should be arisen that prisoners will be back to society at the end of the day.

TECHNICAL ASSISTANCE

Led by Dr. Shenglan Tang

Technical Assistance - What should we do?
- What is technical assistance/consultancy?
- Should researchers/academic staff do TA and why?
- Current situations in EQUI-TB programme partners
- What are potential problems of doing TA?
- How can we better manage our TA?

What is technical assistance/consultancy?
- Services provided to help projects or organisations to achieve technically their objectives or missions, as requested.
- TA/consultancy services consist of several different type of work, e.g. project design, monitoring and evaluation, training, etc.
- It can be short-term (several weeks) or long-term (several years)

Should researchers/academic staff do TA and why?
- Yes, in principle, because:
We can use our knowledge, skill and expertise generated from our research to contribute to health development, and we can also develop more research questions when we do some TA work. In addition, doing TA sometimes can help poorly paid researchers from developing countries to increase their income.

Current situations in EQUI-TB programme partners
- China – TA on social assessment for TB control funded by DFID
- Malawi – Consultancy for CARE; Consultancy for NTP – training in TB control traditional healers
- Zambia – Development of TB treatment/control guidelines; HIV/AIDS
- Liverpool – TA in China, Nigeria (PATH), and consultancy services
- UCL - ?

What are potential problems of doing TA?
- Doing too much TA/consultancy may affect our main research (negatively) including writing papers for publications
- Causing some tension between colleagues
- Issues on salary replacement cost and overhead
- Other problems

How can we better manage our TA?
- No appropriate TA policy developed by the partners from developing countries
- Seeking a wide consultation with different stakeholders within your institution
- Developing appropriate TA policy and its implementation guidelines for your institution (benefits of having a TA policy)
- Reviewing the implementation of the TA policy and the guidelines and revising them, if necessary
- In principle, academic staff/researchers should not spend more than ¼ (subject to individual cases) of their time to do TA work

Questions and Answers:

- Different projects will set up different policy. Recommend to establish a kind of TA committee to developing TA policy
- It's impossible to concrete common policy

For Zambia, if with TA policy, EQUI-TB will need to pay extra-salary to MOH. How about those full-time staff for these projects?

It's important to young Chinese researchers. But how to involve Liverpool to participate?

Closing: TA is out or your core business, sometimes it's hard to differentiate TA with core business; Bad individual TA will have institution reputation; Salary replacement for individual TA.

DIFFERENT RESEARCH METHODS AND PROCESSES

Panel discussion: Method comparison. Led by Dr. Rachel Tolhurst.
Constructive Comparison of Different Research Methods and Processes: How can they fill research gaps and maximise EQUI – TB's potential?

Structure of session

- Brainstorm how research can promote implementation of pro-poor strategies
- Brainstorm advantages of different research methods and processes to do this
- Group work on taking forward a specific example
- Reporting back and wrapping-up

Question 1:
How can research "promote implementation of pro-poor strategies which enhance care and support for TB among the poorest"?

Research outputs

- Advocacy on importance of pro-poor approaches and examples of such approaches to
- policy makers in specific contexts
- global policy-making and funding bodies– e.g. WHO, World Bank, Bilateral aid agencies

Research outputs
What characteristics do research outputs need to be convincing and useful to policy-makers?

- Seen as rigorous / good quality
- Seen to be addressing problems that policy makers are concerned about
- Presented in a way that policy makers can understand and won't take up too much of their time
- Send clear messages
- Further understanding of issue
- Offer options for action

Research Processes

- Build capacity of researchers to investigate the problems that 'pro-poor' strategies need to address
- Build capacity of researchers and programme managers/staff to develop 'pro-poor' approaches and strategies
- Enable recommendations for politically feasible policy change through understanding views of different stakeholders

Research processes

- Interest policy makers and programme staff and make findings acceptable (e.g. through involving them in the research)
- Increase understanding of healthcare processes and decision-making and build awareness of health rights amongst poor people (e.g. through involving them in the research / feeding back findings)
- May enable poor people to take a more active part in shaping policy and holding policy-makers and practitioners accountable

Question 2:
What are the choices in terms of methods, methodologies and research processes?

Qual/ quant methods

More qualitative	More quantitative
FGDs	Questionnaire surveys
Diagramming methods – e.g. mapping	Diaries – e.g. health status, health seeking behaviour, expenditure
In-depth interviews	Epidemiological studies
Ranking	Bio-medical research – e.g. molecular biology
Textual analysis	Bio-medical intervention studies – e.g. control trials
Observation	Observation

Qual / quant methodologies

More qualitative	More quantitative
Intensive data collection	Extensive data collection
Samples representing diverse population groups	Statistical samples
Focus – why, how, what?	Focus: how many?
Analysis: according to categories arising from data	Analysis: according to pre-determined categories
Interaction – informal, flexible, focus on establishing rapport	Interaction – formal and controlled, according to set protocol

Question 3:
What are the advantages of different research methodologies and processes to "promote implementation of pro-poor strategies which enhance care and support for TB among the poorest"?

Qualitative methodology – advantages for EQUI-TB purpose

- Can capture views and perspectives of the poor and people who work with them - produces an account closer to their reality
- Observation allows understanding of differences between what people think, say and do
- Enables appreciation of complexity – e.g. decision making processes for seeking care
- Can help to formulate appropriate hypotheses, definitions of study population and questionnaires
- Can enable understanding of the meaning of quantitative trends or associations
- Useful for research with marginalised groups who may be particularly difficult to study through quantitative methods – e.g. difficulties getting representative samples
- May raise awareness of the issue being researched
- Flexibility provides opportunities for new issues to emerge – e.g. can challenge assumptions of quantitative models

Quantitative methodology - advantages for EQUI-TB purpose

- Permits generalisations to be made about large populations on the basis of much smaller (representative) samples
- Can help establish a sense of causality regarding the impact of given variables on specific outcomes – e.g. can test hypotheses about the relationship between aspects of poverty and different health outcomes
- Allows other researchers to validate the original findings by replicating the analysis
- Allows assessment of costs and benefits of different approaches in terms of resources, especially financially
- Accessible to most policy-makers who have been trained within this approach
- Can develop new medical techniques to provide better care for poor
- May raise awareness of the issue being researched?

More participatory processes: advantages for EQUI-TB purpose

- Can raise awareness of the issue being researched
- Can build skills for analysis, planning, advocacy and change management amongst poor people
- Can improve sustainability of interventions through maximising ownership

Less participatory approaches: advantages for EQUI-TB purpose

- Can enable macro-level planning
- Findings can be applicable across different contexts – e.g. new diagnostic methods
- Enables direct comparisons across different contexts
-

Group Work:

1. What are the implications of the research presented for "promoting the implementation of pro-poor strategies which enhance care and support for TB among the poorest"?
2. What further or supporting research by EQUI-TB would be necessary to realise these implications?
3. What methods and processes would be useful for this research and why?

Output of the group work

1. Method Discussion:

Qualitative methods:

- Need to develop ideas
- Descriptive research specific info
- Output offer penal touch for advocacy
- More participatory
- Ownership
- Acceptance
- Being understanding
- Interpretation of quant results
- Enables participation
- Appropriately for poor to void heir issues.
- Collective decisions
- More feasible options for implementation
- Risk share

Quantitative methods:

- Enable quantification magnitude of issue
- Can here with advocacy for those
- External validity
- More scientific
- Less participatory

who prefer figures
- Can identify relationships/ associations
- Sometimes inappropriate
- More predictable
- Takes less time

2 Further work:

- Aimed at health workers: need to include lab workers and policy makers
- Meetings
- Training
- Pilot study

Acceptable to poorer patient population?
Impact on patient diagnosis time
Aid poor patients benefit?
How to transport +communicate results + time
Health Economic--Audit--Time measurements
Safety (liked separate study)

3.concluded: Need different methodologies to study different things:

- Qualitative methods are acceptable for studying patients' options and preferences. Sample groups such as policy makers, patients, health care workers, lab staff, transportations

- Quantitative: comparison of, case defection , pre/post implementation + with control district (difficult! Could be non-participatory. Routine data—partly answers questions.)

Example of a Quantitative Study:
Use of dried whole blood spots to measure CD4 lymphocytes in HIV infected patients. Given by Dr. Peter Mwaba, UNZA-UCLMS project

Background

- 42 million infected with HIV virus-2002
- 28 million in sub-Saharan Africa
- By 2005- 3 million people from the developing world will be on ARV'S-WHO
- Majority of the affected Countries do not have the capacity to perform CD4, Viral load and other tests.

What are the challenges?

- Fresh samples needed to perform CD4 and viral load-less than 18 hours
- Refrigeration for storage and therefore electricity a must
- Complex technology and therefore highly specialised man power a must
- Not easily accessible in most remote parts of our countries.

Methodology

- Ethics approval
- 42 known HIV infected patients
- Informed consent, 50ul of whole blood, spotted and dried on five circles on Guthrie cards and stored at room temperature 22-28^{0}C until analysis 30 days later
- On the same day of blood collection, measured CD4 counts from each patient by flow cytometry
- TRAx Kit- an ELISA based assay that was modified for filter papers

Results cont.

- Mean CD4 with flow cytometry was 289 cells/ul while SD 172 and a range of 55-668
- Whole blood from filter paper 347 cells/ul SD 139 and a range of 120-800
- There was a very nice correlation between the two methods though this tended to be less on CD4 less than 200.

Conclusion

- It is feasible to measure CD4 counts from whole blood dried on filter papers
- There is need to refine the method and test it under field conditions
- Good alternative to current methods that require storage facilities and complex transportation systems.
- Development of field friendly technologies is the way forward for most developing countries.

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EQUI-TB for the emphasis on poverty in our current research.

Comments by the participants
HIV project in Malawi using CD4 indicator (in Malawi, most villages have no electricity). Thus cannot test the blood samples even or collected ones. So there they use filter-paper methodology: blood dried on filter-paper and transport to test centres. They find that the results are no big difference by using the fresh sample.

TRIENNIAL REVIEW (MID TERM EVALUATION)

Presented by Dr. Bertie Squire
Aim: To assess the achievement of each programme in relation to its Purpose.

EQUI – TB's purpose is:
To promote implementation of pro - poor strategies, which enhance care and support for TB among the poorest

Objectives of Review:
- Relevance of programme objectives to meeting knowledge needs of decision makers
- Where purpose and planned outputs are consistent with current DFID strategy
- Scientific quality of programme outputs
- Extent to which programme's purpose is likely to be achieved
- Production and dissemination of new knowledge
- Value for money achieved by programme
- Opinion on whether sum of programme parts is greater than its constituent parts (i.e. Links, multidisciplinary)
- Extent to which programme has strengthened capacity in developing countries
- Effectiveness of programmes internal management arrangements
- Perceptions of nature of the partnership between programmes and HPD

Process
- Review Team will complete a DFID Project Scoring Summary Report (see handout).
- Normally Review Team are outside consultants (often managed by IHSD)
- Consultation of 10 –12 'informant' who will be contacts proposed by the programme, selected members of DFID policy division, others known to Review team who might be useful commenters.
- Visit UK Collaborators and visit Developing Country Partner

EQUI – TB need to prepare:
- a report on current needs/ priorities in TB
- an Output to Purpose Review report (likelihood of achieving purpose, outputs, risks, efficiency, value for money, collaborators, any proposed changes to Log Frame, examples of 'putting research into practice'
- Evidence of scientific quality: list of 10 best publications, conference presentations
- Note on research ethics processes
- List of research, policy makers, or managers who are potential beneficiaries of the KP and with whom the Review team may wish to contact

Highlight: EQUI – TB Objectives are:
1. A substantial and cohesive body of policy – relevant new knowledge
1.1 Improved accessibility of quality – assured TB care for poor and disadvantaged people
1.2 Approaches to reducing the threat of multi – drug resistant TB
2. New Knowledge disseminated to key policy makers and opinion leaders:
3. Strengthened research capacity

NEXT STEPS

ANNOUNCEMENT FOR NEXT MEETING Dr. Felix Salaniponi
In Malawi
Nov. 30th, 2004, Annual NTP dissertation meeting
Dec. 2nd -3rd, 2004, EQUI-TB-KP Partners Meeting

FIELD VISITS

Ming Hang District (hospital, labs, clinics)
School of Public Health

WORKSHOP RESOLUTIONS

- Tremendous progress has been made to date
- Need for emphasizing and developing the collaboration among partner countries, such as providing technical assistance to Malawi for the TB survey in Malawi, developing collaborative projects between China and LSTM on the transmission and diagnosis of TB and MDRTB, improving internet communication among China, UCL and LSTM for the molecular epidemiologic study on TB, and communicating on the data analysis methodology among partner researchers.
- The next partners meeting is to be held in Malawi 2004

Annex 1: POSTER SESSION

Poster on display

1. A descriptive study on TB epidemiology and TB case management in counties with or without TB control programme. Xu B, Xiu Y, Zhou PY, Yang BF, Jiang QW
2. TB diagnostic delay and its influencing factors in counties with or without TB control programme in Jiangsu Province Xu B, Xiu Y, Zhou PY, Yang BF, Jiang QW
3. Access to TB care – What did the chronic cough patients experienced on the way of healthcare seeking. Jiang QW, Xiu Y, Xu B
4. Socioeconomic Determinants of Knowledge and Attitudes About Tuberculosis in Rural Jiangsu Province. Xu B, Wang WB, Jiang QW
5. The patient's expenditure on TB care in counties with and without TB control programme. Xu B, Zhao Q, Jiang QW
6. Study on Knowledge, Attitude and Behaviours of TB Care among Health Providers in Jiangsu Province. Xu B, Zhao Q, Jiang QW
7. Epidemiology and determinants of drug-resistant tuberculosis in rural area of north Jiangsu province. Jiang Q W, Xu B, Yang B F, Jiang WL, Zhou PY

Annex 2: AGENDA OF THE MEETING

Date / Time	**Activity**	**Facilitator**
Thurs. 13/11/03	**Arrivals and registration**	F. Chaowei, L. Xiaoyun
Fri. 14/11/03		
9.00 – 9.30	Set up of posters around main meeting room	
9.30 – 9.45	**Welcome and personal introductions**	Q. Jiang, B. Squire
9.45 – 11.30	**Presentations from Partner groups:** (selected highlights from Yr 3 and short description of Technical Assistance policy and activities) (10 mins presentations, 5 mins questions per group)	Yan Fei and Malawi
9.45 –10.30	**Zambia** **Liverpool**	
10.30 – 11.00	**Coffee Break**	
11.00 – 11.30	**Malawi** **China**	
11.30 – 11.40	**Introduction to the Vulnerability Framework**	Bertie Squire
11.40 – 12.30	**Group Work:** **Making EQUI – TB Programme more Pro Poor** (3 mixed groups): Using the Vulnerability Framework, how do our current activities fit and how can we focus our work better in the future. Each group will report one example of an existing piece of work that could be better focused and one idea for a piece of work for the future.	Gillian Mann
12.30 – 2.00	**Lunch & Group Photo**	
2.00 – 3.00	**Reporting from group-work:** (10 mins presentations, 10 mins questions per group)	Andy Ramsay
3.00 – 3.30	**Coffee Break**	
3.30 – 4.00	**EQUI –TB Programme: Midway.** (discussion of where are we? are we on track? mid term evaluation, next steps)	Bertie Squire
4.00 – 4.30	**Summary of the day and objectives for Day 2**	Professor Jiang
5.30 – 6.30	**Briefing the wider TBKP Partnership in China**[1] (opening by Professor Jiang QW and Bertie Squire)	EQUI – TB China
6:30 – 8:00 8.00 -	**Welcome Dinner** Night Shanghai tour	EQUI – TB China

[1] This is open to all who have been invited to the dinner. It is an opportunity for EQUI – TB China to present to a wider audience (such as MoH, CDC, Fudan students, Ming Hang) their work.

Sat. 15/11/03		
0900 – 9.30	**Technical Assistance discussion** (building on the presentations in the morning)	S Tang
9.30 – 10.30	**Poster Display / Discussion Session**	**Gong YL & Zhan SK**
12.00 – 1.30	**Lunch**	**Shanghai Anti-TB Association**
1.30 – 3.00	**Panel Discussion** Constructive Comparison of Different Research Methods: How can they fill research gaps and maximise EQUI – TB's potential.	R Tolhurst
3.00 – 3.30	**Coffee Break**	
3.30 – 4.00	**Open Discussion Session**	Bertie Squire
4.00 – 4.30	**Management and Administration update**	Bertie Squire
4.30 – 5.30	**Round-up: Date & Venue for next Meeting**	Bertie Squire
6:00 – 7:00	**Supper**	
7.00 – 10:00	Entertainment (Shanghai Grand Theatre)	EQUI – TB China

Monday 16/11/03	**Field visit:** Ming Hang District (hospital, labs, clinics) School of Public Health	China KP Jiang Qinwwu

ANNEX 3: LIST OF PARTICIPANTS

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