

to the TB management units and addresses all the components of the Stop TB strategy.

Design/methods: Process and outcome indicators were used to measure the national tuberculosis control programme performance at each level of the model. Various data sources were used to collect the necessary information retrospectively to measure these indicators. A scoring system was applied to measure performance using these indicators, from 0 to 4, with the higher score reflecting better performance, and '0' if information is not done or not available. The association between performance—measured using these indicators—and the reported smear positive case detection rates for 2008 was studied.

Results: The indicators that were significantly associated with tuberculosis case detection were the following: the proportion of public and private providers outside the national tuberculosis control programme that are engaged in TB control out of existing ones; the sale of anti-TB drugs in the private pharmacies; the positivity rate among TB suspects; The proportion of smear positive TB cases among pulmonary TB cases; Contact management; and proportion of patients subjected to culture and drug susceptibility testing.

Conclusions and recommendations: This tool can assist countries in evaluating their situation, identify gaps, and provide good evidence about the efficiency and sensitivity of their surveillance systems.

TB PROGRAMMES AND CARE: PATIENT PERSPECTIVES

PC-100294-15 The health-disease process from the perspective of patients being treated for tuberculosis

P Hino,¹ M R Bertolozzi,¹ T C S Villa,² E Y Egrý.¹ ¹Collective Health/University of São Paulo, São Paulo, SP, ²Collective Health/University of São Paulo, São Paulo, SP, Brazil.
e-mail: paulahino@usp.br

Background: To know the meaning of tuberculosis patients attribute their health-disease process during treatment.

Methods: Qualitative, exploratory study developed in Capão Redondo, Sao Paulo, Brazil. Data were collected through semi-directive interview in January 2010. Were selected patients reported in 2009, in treatment, over 18 years and without limits of cognition. The empirical data were decoded using the technique of discourse analysis.

Results: The tuberculosis disease remains steeped in stigma, sometimes unnamed. Patients move away from friends and hide their diagnosis from co-workers. Tuberculosis diagnosed causes feelings of panic, agony, anger, worry, depression and discouragement, arising

from lack of knowledge of disease and possibility of healing, removal and family disruption to employment. Leads to changes in the habits of the individual, taking care of your health. The condition that promote adherence to treatment: relationship with the health team, desire to cure, treatment credibility, sense of improvement, non-contagious and the provision of free medication. The difficulties for the success of treatment were side effects of medication, uncertainty about the cure, the distance between home and the health service and the need to attend daily to receive medication, long term treatment, and the feeling of improvement in remission symptoms.

Conclusion: Despite advances in diagnosis and treatment of tuberculosis is necessary for the health service to investigate the determinants of adherence to treatment, clearly dependent on the conditions of living.

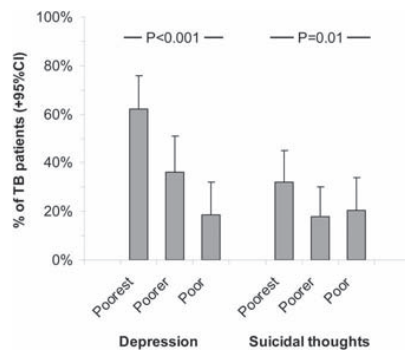
PC-100563-15 Depression and suicidal tendencies in TB patients

N R Allen,¹ F Oliver,^{1,2} C Loïselle,¹ C Rocha,^{1,2,3} R Montoya,^{1,2,4} K Zevallos,^{1,2,3} A Curatola,^{1,2,4} C A Evans.^{1,3,5} ¹IFHAD: Innovation for Health and Development, London, UK; ²A B Prisma, Lima, ³Universidad Peruana Cayetano Heredia, Lima, ⁴ADRA Peru, Lima, Peru; ⁵London School of Hygiene & Tropical Medicine, London, UK.
e-mail: nickallen70@hotmail.com

Background: TB principally affects poor people and worsens poverty. TB may induce depression that can cause immunosuppression and worsen TB. Depression may compound the problems faced by TB patients and impair diagnosis and treatment adherence. We therefore assessed the interaction between poverty and depression in TB patients.

Method: In five Peruvian shantytowns, 135 unselected adult patients recently diagnosed with pulmonary TB answered questionnaires addressing poverty indicators. A poverty scale was constructed based on 5 poverty domains, the scores from which were combined into an overall poverty score that was validated with principal component analysis (97% agreement). The same patients concurrently underwent a psychological assessment, including completing the 21 question Beck depression inventory that has been validated in Latin America.

Results: TB patients had high rates of depression (41%), self-reported suicidal thoughts (24%) and poverty (average per capita income \$1.7/day). More extreme poverty was associated with depression ($P < 0.001$) and suicidal ideation ($P = 0.01$), independently of age ($P = 0.1$), sex ($P = 0.4$) and past TB ($P = 0.1$). Specifically, 62% of the poorest third of TB patients were depressed versus 19% of the least poor third of patients ($P = 0.0002$; graph). Considering the five measured domains of poverty: lack of assets ($P = 0.01$) and household crowding ($P = 0.01$)



were associated with depression; there was a similar trend for limited household facilities ($P = 0.08$); and depression was not associated with income ($P = 0.9$) or food-spending ($P = 0.2$).

Conclusion: The double challenge of having TB and extreme poverty were strongly associated with depression and suicidal ideation. TB patients living in extreme poverty are much more likely to be depressed or suicidal than patients with better socio-economic resources. Efforts to control TB may be strengthened by integration with activities addressing the despair associated with depression, TB and poverty.

PC-101195-15 Factors determining household costs of tuberculosis and coping strategies in Tajikistan

R Aye,¹ K Wyss,¹ H Abdualimova,² S Saidaliev.³ ¹Swiss Tropical and Public Health Institute, Swiss Centre for International Health, Basel, Basel-Stadt, Switzerland; ²United Nations Development Program, Global Fund Office, Dushanbe, ³Ministry of Health of the Republic of Tajikistan, Dushanbe, Tajikistan. Fax: (+41) 61 284 81 03. e-mail: raffael.aye@unibas.ch

Background: Poverty is a cause for tuberculosis (TB) disease, but at the same time one of its consequences. TB patients usually encounter high costs of treatment, even in settings where drugs are provided for free. We investigated factors influencing expenditure levels and risk of impoverishment among TB patients in Tajikistan.

Design: Questionnaire survey with an initial and a follow-up interview of each adult new pulmonary TB case registered over a period of four months in twelve DOTS districts. In a multivariate mixed-effect regression, the main determinants of out-of-pocket payments—either over the whole course of the disease or after enrolment in DOTS treatment—were identified.

Results: Patients and their households faced mean expenditures of US\$396 for a TB episode. The main determinant of out-of-pocket payments was receiving additional medication besides the anti-TB drugs. Further important factors were the duration of hospitalization and treatment delay. Sex showed no association with expenditure. To cope with the costs of

illness, two thirds of patients employed a potentially detrimental coping strategy. TB patients raised on average US\$23 through credits, US\$57 through borrowing money without interest and US\$102 through selling assets.

Conclusion and recommendations: Patients in Tajikistan and possibly other post-Soviet countries face catastrophic out-of-pocket payments during a TB episode. This constitutes a high risk for further impoverishment of patients. Mitigation strategies are urgently needed. Case management factors including the common use of additional, symptomatic medication and widespread hospitalization lead to high costs to patients and should be carefully reassessed.

PC-100024-15 Tuberculosis in Iraq: a post-invasion survey of knowledge, attitude and practice in the Anbar Gove

T K Y Al Hilfy,¹ S H Sevil Huseynova.² ¹Iraqi Anti TB society, Baghdad, Risafa, ²University of Baghdad/Al Kindy College of Medicine, Baghdad, Risafa, Iraq. e-mail: thamer_sindibaad@yahoo.com

This community-based cluster study aimed to explore tuberculosis (TB) attitudes, knowledge and practices in Anbar Governorate, Iraq, as well as compares these attributes to a subset of the population with good TB knowledge. Completed surveys were obtained from 692 subjects. 10.6% of these met study criteria for having good knowledge of TB. They were more frequent health care seekers ($P < 0.001$), although also more likely to be dissatisfied with the availability of medicine and equipment at those health clinics ($P < 0.001$). Higher percentages in this Good-Knowledge subgroup felt that TB affected relationships with friends ($P < 0.001$), family ($P = 0.039$) and work performance ($P = 0.036$). Community members from a wide-range of socioeconomic and educational levels require information about TB.

PC-100046-15 Multiple clinics vs. a one-stop shop: patients' experiences accessing TB-HIV care in South Africa

A Daftary,^{1,2} N Padayatchi,^{2,3} Z Gwamanda,² L Calzavara.¹ ¹Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada; ²Centre for the AIDS Programme of Research in South Africa, Nelson R Mandela School of Medicine, University of KwaZulu-Natal, Durban, KwaZulu-Natal, ³Department of Public Health Sciences, Nelson R Mandela School of Medicine, University of KwaZulu-Natal, Durban, KwaZulu-Natal, South Africa. e-mail: amrita.daftary@utoronto.ca

Background: Efforts to mitigate the TB-HIV co-epidemic are undermined by a failure to integrate TB and HIV healthcare services. Together with clinical complications, the social contexts of coinfection may impede seamless integration of TB-HIV care.

Objective: This qualitative study explored patients'