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ABSTRACT BOOK

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PS-08-586-31 Costs of seeking care for tuberculosis diagnosis after the implementation of universal health coverage in Indonesia

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Background: Tuberculosis (TB) diagnostic delays and higher costs are associated with seeking care in multiple private providers. This study aimed to assess TB patients' seeking care behavior, costs incurred for diagnosis and their determinants after the implementation of universal health coverage (UHC) in Indonesia.

Methods: In July-September 2016, we interviewed adult TB patients in Indonesia who had been treated for at least one month to assess their seeking care behavior. We also asked direct and indirect costs incurred during pre-diagnostic phase, and calculate the costs in absolute terms (in US Dollars) and relative terms as a share to annual household income (in %). To identify determinants of costs incurred in absolute and relative terms, we applied general linear mixed model to adjust for our cluster sampling design.

Results: We included 282 patients in analysis. TB patients in rural district prefer to seek care firstly to private clinic than those living in urban district (OR=2.3, 95% CI=1.08-4.96, P=0.031). Patients with private clinic as the first contact appeared to have more visits significantly than patients who came firstly to PHCs (P< 0.05). Visiting private clinic as the first contact also led to a higher costs than visiting PHCs both in terms of facility costs (B=16.72, 95% CI=10.55-22.89, P< 0.001) and total costs (B=22.40, 95% CI=7.72-37.07, P< 0.001). In relative terms, the higher proportions of total costs to annual household income were related to private clinic as the first contact (B=2.21, 95% CI=1.13-3.29, P< 0.001), rural district (B=1.99, 95% CI=0.81-3.18, P=0.001), and poor household (B=1.82, 95% CI=0.80-2.83, P=0.001).

Conclusions: Despite the implementation of UHC in Indonesia, the preference to seek care to private providers was still high and led to high number of diagnostic shopping and higher costs. Along with health financing reform, a strategy to strengthen public-private mix is required to improve quality of diagnostic, reduce diagnostic delays, and minimize patients' costs.

PS-08-587-31 Mixed-methods study to estimate the social return on investment of a tuberculosis case finding and patient support intervention in Ho Chi Minh City, Viet Nam

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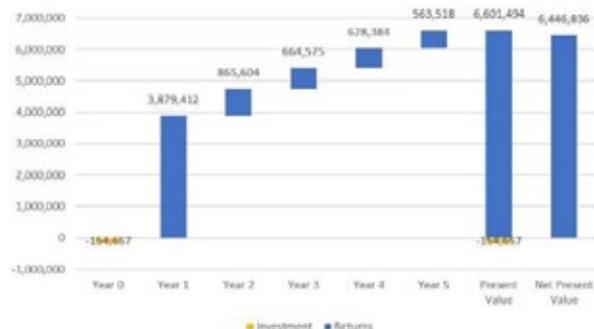
Background: Tuberculosis (TB) remains a main cause of avoidable death, and a heavy economic burden for patients and society. There is extensive evidence on the cost effectiveness of TB care and prevention, but few studies have assessed the social return on investment (SROI) of incremental case finding and patient support beyond the standard of care.

Methods: This mixed-method study estimated the societal benefit of a community-based TB case finding and patient support intervention. We conducted a literature review, two focus group discussions and 14 in-depth interviews to identify stakeholders and value drivers of the intervention. Qualitative data were analyzed using thematic framework analysis. Quantitative data sources included the National TB Program routine surveillance system, public ecological databases, published studies, project accounts and 11 beneficiary surveys.

From these data, we constructed a SROI model according to the methodology of Social Value UK, which entails mapping and monetizing value drivers, adjusting crude impact for four counterfactuals, and calculating the SROI based on the present values of benefits and costs in a 5-year discounted cash flow model.

Results: Our literature review initially identified 8 beneficiaries and 25 value drivers, which qualitative findings reduced to 5 and 14, respectively. Crude monetization of the value drivers over a 5-year time horizon yielded a cumulative benefit of USD64,168,005, which was reduced by 89% to USD7,072,408 after adjusting for the counterfactuals. Using a 3.5% discount rate, the present value of the cumulative benefits was USD6,601,494. Accounting for USD154,657 in total intervention costs, the net present value was USD6,446,836, and the SROI was 4,268% indicating that for every USD1.00 invested, the social value created was USD42.68.

Conclusions: The SROI model showed that comprehensive interventions for TB can generate additional societal benefits. However, estimates must include a thorough analysis of the counterfactuals to avoid overestimating the impact of these interventions.



[Adjusted total and net present value of investment and social returns]

PS-08-588-31 Cost effectiveness of latent tuberculosis screening among migrants in Stockholm

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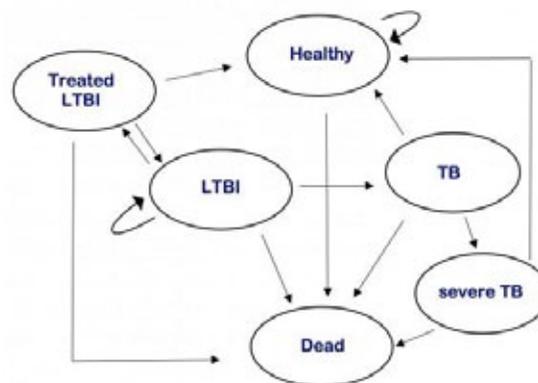
Background: The majority of Tuberculosis (TB) cases in Sweden result from activation of latent Tuberculosis infection (LTBI) in migrants from endemic countries. LTBI screening is recommended for all asylum seekers from countries with an incidence of >100/100 000. Preventive treatment should be offered to young persons (in Stockholm < 18 years is the threshold) and older persons who have risk factors. This study aimed to assess the cost effectiveness of the current LTBI screening strategy in Stockholm.

Methods: A Markov model with six health states (figure 1) was built to predict the future costs and effects of the current screening strategy compared to no screening for different age groups over a period of 20 years. A societal perspective was used. Costs and epidemiological parameters were obtained from local data. Sensitivity analysis and probabilistic approaches were conducted. The soft threshold for cost effectiveness in Sweden is around 500 000 SEK/QALY, which was used as reference.

Results: Results differed according to age which reflect the probability of being treated. The incremental cost effectiveness ratios (ICER) were 720 000, 2 200 000, 2 300 000 SEK/QALY for cohort of 16, 30, 50 years old respectively.

Conclusions: LTBI screening was not cost-effective in any of the age groups, but it was borderline for young migrants. This is largely explained by not offering treatment to the majority of those screened positive. Further

research is needed to determine which risk groups, based on country of origin, age and risk factors for progression, should be targeted for more cost-effective strategies in the future.



[Diagrammatic representation of the Markov model used for cost effectiveness analysis]

PS-09-B1 GeneXpert

PS-09-589-31 GeneXpert: a hope for extra-pulmonary tuberculosis patients of Bhubaneswar, Odisha, India

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Background and challenges to implementation: Extrapulmonary Tuberculosis (EP-TB) contributes approximately 10 to 15% of TB cases in India. Due to paucibacillary nature and lack of diagnostic means, they often remain untreated with greater proportion in pediatric and HIV patients. WHO recommended GeneXpert for EP-TB diagnostic and RNTCP established 1135 GeneXpert laboratories in India and developed guidelines for EPTB testing. So, the aim of this study was to evaluate EPTB referral enhancement for GeneXpert test and notification.

Intervention or response: GeneXpert machine was installed in Feb 2016. Both EP-TB and pulmonary samples from RNTCP, both public and private health facilities were received and processed before test as per the WHO guidelines.

Results and lessons learnt: Out of total 1858 tests done between Feb 2016 to Feb 2017, 38.1% were EP sample among which 65.3% & 34.5% referral from public and private respectively and there was no referral from RNTCP. 16.1% of EP-TB patient were TB positive and prevalence of rifampicin resistant was 1.7% among all the presumptive EP-TB cases. 19.8% of EP-TB samples were received from under 14-year children out of which 5% were TB positive. Out of total sample, 29.1%