death, or a minimum of 3 months. We estimated serum 25-OH vitamin D and IL-1β in the CSF by ELISA on pre-treatment specimens. We defined poor outcome as death or severe neurological sequelae (modified Rankin score of 3–6). Outcome was independently scored by two investigators before estimating vitamin D and IL-1β levels.

Results: Mean age of the patients was 38 ± 13 years; 28 (70%) were men. Median (IQR) duration of symptoms was 20 (14–34) days. Twenty-two (55%) patients had grade 3, 12 (30%) had grade 2, and the remaining 6 (15%) had grade 1 TB meningitis. On follow-up, 21 patients had a poor outcome - 15 patients died; and 6 of the 25 survivors had severe neurological sequelae. Lower Glasgow coma score (9 [7 - 10] vs. 12 [10 - 15]; P = 0.007) was significantly associated with poor outcome. Twenty-two (55%) patients had deficient (<20 ng/mL; n = 10) or insufficient (20-30 ng/mL; n = 12) serum vitamin D levels. But, serum vitamin D level was not associated with clinical outcome (good vs. poor outcome: 28.30 ± 14.96 vs. 35.92 ± 17.11 ng/mL; P = 0.141). Further, serum vitamin D level did not correlate with CSF IL-1β level (Spearman’s rho = 0.083; P = 0.609).

Conclusion: Vitamin D deficiency/insufficiency is common among adults with TB meningitis. But, the low vitamin D levels are not associated with IL-1β, a marker of CNS inflammation, and clinical outcome. Hence, vitamin D supplementation may not be useful as an adjunctive treatment in TB meningitis.

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Type: Poster Presentation

The acceptability and feasibility of chemical prophylaxis for schoolchildren and adolescents with latent tuberculosis infection in Shanghai, China: A qualitative study

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Background: China has the 2nd highest burden of tuberculosis (TB). More about 40-45% of population were infected with TB and most of them were latent tuberculosis infection (LTBI). However, with better socioeconomic status, the prevalence of LTBI in Shanghai is relatively lower, especially among children. The contact history with TB patients would increase the risk of LTBI, and about 20% children contacts had a positive T-SPOT.TB result in Shanghai. Children with LTBI could contribute to the pool of individuals with LTBI from which future active TB cases will arise. Chemical prophylaxis for people with LTBI is recommended by WHO to end TB occurrence. This study aimed to assess the acceptability and feasibility of chemoprophylaxis for schoolchildren and adolescents with LTBI in Shanghai, China.

Methods & Materials: Seven Focus Group Discussions (FGDs) were conducted in three districts in Shanghai among August and October, 2015. Forty-two participants including 15 TB contacts and 27 health care providers (either were TB program officials or general practitioners from CDCs and community health-centers) were invited. The Data about TB management, children TB-screening and acceptability of chemoprophylaxis for children with LTBI were collected by FGDs. Nvivo 10.0 was used to identify the key issues from these interviews through coding, categorization and grouping into emergent themes.

Results: While many children used to reject TB-screening due to concerns of radiation and haemospasia, the screening among children TB contacts were more acceptable by parents. Poor knowledge about positive T-SPOT.TB results and chemoprophylaxis has made it difficult to get the permission on prophylaxis for schoolchildren and adolescents with LTBI. Health providers could understand the potential benefits about chemoprophylaxis but still thought it unfeasible by now considering the adverse drug reaction, high costs for medication, long duration and unclear effect indicators. In addition, heavy workloads and poor incentive mechanisms were not uncommon in the basic TB control management.

Conclusion: The connection between households, schools, communities and hospitals should be established for further surveillance of adverse drug reaction and health education on LTBI and chemoprophylaxis need to be strengthened. The current financing and incentive mechanisms of TB control need to be improved for better performance in TB control.

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Effects of motivational interviewing on the treatment adherence of Tuberculosis patients

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Background: Tuberculosis is one of the deadly diseases worldwide (Enarson, 2000). The WHO reported that one third (1/3) of the world’s population is infected with TB. It is curable; however, if left untreated may be fatal. Non-adherence is one of the barriers in eliminating TB. Adherence declines due to lack of motivation of patients to complete their treatment (Pagulayan, 2008). Motivation affects self-efficacy of patients to adhere to their treatment (Treasure, 2004). Hence, modification on the attitude and behavior of patients may enhance treatment adherence (Dela Cruz, 2002). MI has been used in smoking cessation and substance abuse, however, no local literature has been found on its use for TB treatment adherence, and application in community settings. This study aims to evaluate the effects of a nurse delivered MI as adjunct to standard health education to enhance treatment adherence of Tuberculosis patients in the health center.

Methods & Materials: The study utilized a true experiment, post test design. Thirty Filipino newly diagnosed patients receiving treatment in the health center were randomly assigned to control
and experimental groups using multistage cluster sampling. The experimental group received four (4) sessions of 30-minutes nurse delivered adjunct MI every week for one month, while the control group received standard health education. MI is a counseling style that used specific questions to direct behavior change by expressing empathy, developing discrepancy, rolling with resistance and supporting self-efficacy. Adherence was measured using Medication Adherence Self-Efficacy Scale and Sputum AFB microscopy before and 2 weeks after the intervention. A panel of experts reviewed the questionnaire to ensure validity, and the instrument to internal consistency.

**Results:** Knowledge about the disease and its treatment combined with motivation can increase self-efficacy to treatment adherence (Ngamvitroj, 2007). MI as adjunct to health education can increase treatment adherence (Riekart, 2011). Consequently, a rapid decrease in the number of M. tuberculosis in sputum. Moreover, studies have shown that MI has significant psychological (75%) and physiological (72%) effect to diseases (Rubak, 2005).

**Conclusion:** Motivational Interviewing delivered by the nurse as an adjunct to the standard health education is effective in enhancing treatment adherence of PTB patients in the health center.

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Time: 12:45-14:15

Room: Hall 3 (Posters & Exhibition)

**The referral pathway of presumptive drug resistant tuberculosis in the urban poor areas of Metro Manila, Philippines**

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**Background:** The National Tuberculosis Control Program (NTP) guidelines emphasize that all presumptive Drug Resistant Tuberculosis (DRTB) with history of previous tuberculosis (TB) treatment and with Multi-Drug Resistant Tuberculosis (MDRTB) contacts should be screened for MDR. Due to lack of tools to identify the referral outcome of presumptive DRTB, the RJPI developed an MDRTB Presumptive Masterlist to account referrals from health center to MDR treatment center. The study aims to understand gaps in the referral pathway experienced by Local Government Units (LGUs) and Non-Government Organizations (NGOs) from initial consultation until initiation of treatment.

**Methods & Materials:** A retrospective descriptive study of patients' data registered on MDRTB Presumptive Masterlist of eighteen Directly Observed Treatment Short-Course (DOTS) facilities in District 1 Tondo, Manila and Payatas, Quezon City from October 2012 to September 2013, were reviewed and analyzed using structured questionnaire. Unpaired t-test used in comparing the turnaround time between LGUs and NGOs including time between Direct Sputum Smear Microscopy (DSSM) results presented to patient and referred to MDR treatment center. A p-value < 0.05 was considered statistically significant. All analysis performed using EZR with graphical user interface for R.

**Results:** A total of 378 Presumptive DRTB was identified and listed in the masterlist. Among them, 97% (368/378) referred and 90% (333/368) screened at MDR Treatment center. Among screened, 85% (283/333) completed the process of MDR screening and provided with an appropriate treatment based on NTP guidelines. 9.5% (35/368) were not screened mainly due to lost to follow up. The duration of time between sample collected and examined at laboratory of NGOs was significantly longer than LGUs (n = 283; p < 0.001). The time duration between the release of DSSM results and presentation of patient at NGOs was significantly shorter than LGUs (p = 0.009).

**Conclusion:** Development of MDRTB Presumptive Masterlist has facilitated tracking of patients due for diagnosis and treatment. Referral system between health center and MDR treatment centers should be strengthened for proper patient endorsement and provided with an appropriate action. The NGOs should lessen diagnosis delays and LGUs should follow up patient for early start of TB treatment.

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**Predictors, outcome, profile of anti-tubercular drug induced hepatitis – A prospective nested case - control study in a South Indian tertiary hospital**


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**Background:** Tuberculosis (TB) remains a major global health problem. The first line anti-tubercular drugs are hepatotoxic. Despite adequate knowledge, we are still unable to predict anti-tubercular drug induced liver injury (DILI) before initiation of treatment.

**Methods & Materials:** This case-control study was nested in a cohort of patients from Christian Medical College, Vellore who were newly diagnosed to have tuberculosis and started on treatment. It was carried out from April 2013 to May 2014. All patients who present with suspected ATT related hepatotoxicity were also enrolled in the study. All patients on treatment were clinically assessed for symptoms of hepatitis at every visit until completion of treatment. The risk factors for ATT induced hepatitis were identified by bivariate analysis and logistic regression analysis with odds ratio and 95% confidence interval.

**Results:** A total of 393 patients were eligible for our study which included 5 patients presenting with DILI. Patients on DOTS regimen had lower rates of HIV infection and disseminated disease but had greater under nutrition when compared with patients on daily regimen. 43 patients out of 393 patients developed DILI. The incidence of anti-tubercular drug induced liver injury was 9.7% (95% CI 7-13.2%) with lower incidence among patients on DOTS regimen (14% Vs 3.5%). HIV infection, daily regimen, disseminated disease, hypoalbuminemia and chronic liver disease were independent risk factors for development of DILI. A prediction score of >5 based on the above risk factors will predict DILI with a sensitivity and specificity of 74% and 67% respectively. All cause mortality in