

Final Abstract Number: 60.017  
 Session: *Epidemiology and Public Health III*  
 Date: Saturday, April 5, 2014  
 Time: 12:45-14:15  
 Room: Ballroom

### Directly observed treatment short-course for tuberculosis control program in Gambella, Ethiopia

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**Background:** Tuberculosis is still the leading cause of illness in the world which accounted for 2.5% of the global burden of disease, and 25% of all avoidable deaths in developing countries. The aim of study was to assess impact of DOTS strategy on tuberculosis case finding and treatment outcome in Gambella Regional State, Ethiopia from 2003 up to 2012 and from 2002 up to 2011, respectively.

**Methods & Materials:** Health facility-based retrospective study was conducted. Data were collected and reported in quarterly basis using WHO reporting format for TB case finding and treatment outcome from all DOTS implementing health facilities in all zones of the region to Federal Ministry of Health.

**Results:** A total of 10024 all form of TB cases had been registered between the periods from 2003 up to 2012. Of them, 4100 (40.9%) were smear-positive pulmonary TB, 3164 (31.6%) were smear-negative pulmonary TB and 2760 (27.5%) had extra-pulmonary TB. Case detection rate of smear-positive pulmonary TB had increased from 31.7% to 46.5% from the total TB cases and treatment success rate increased from 13% to 92% with average mean value of being 40.9% (SD= 0.1) and 55.7% (SD=0.28), respectively for the specified year periods. Moreover, the average values of treatment defaulter and treatment failure rates were 4.2% and 0.3%, respectively.

**Conclusion:** It is possible to achieve the recommended WHO target which is 70% of CDR for smear-positive pulmonary TB, and 85% of TSR as it was already been fulfilled the targets for treatments more than 85% from 2009 up to 2011 in the region. However, it requires strong efforts to enhance case detection rate of 40.9% for smear-positive pulmonary TB through implementing alternative case finding strategies.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1234>



Final Abstract Number: 60.018  
 Session: *Epidemiology and Public Health III*  
 Date: Saturday, April 5, 2014  
 Time: 12:45-14:15  
 Room: Ballroom

### Molecular epidemiological investigation of hepatitis E in Shandong province, China

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**Background:** Accumulating evidences indicate that hepatitis E is a zoonosis. Pigs, rabbits and some other animal species are reservoirs for hepatitis E virus (HEV). This ubiquitous nature of HEV raises public health concern for zoonotic transmission and food safety in human population. The aim of this study was to investigate the prevalence of HEV infection in patients with hepatitis E and to analyze the molecular epidemiological characteristics of HEV strains prevalent in Shandong phylogenetically.

**Methods & Materials:** The paired sera and feces samples were collected from 22 clinical patients diagnosed as acute hepatitis E with anti-HEV IgM positive, elevated level of ALT/AST and relative clinical signs and symptoms. All the samples were amplified for HEV RNA by Reverse-Transcription nested Polymerase Chain Reaction (RT-nPCR), and sequences were analyzed by Mega.5 and SPSS.10 phylogenetically. The Real-time PCR was used for HEV RNA quantification.

**Results:** 5 of 22 feces samples were detected HEV RNA positive with 365 bp fragment amplified by RT-nPCR using ORF2 primers. Four of the five positive samples shared high nucleotide sequence identity (95%-98%) with swine HEV (CH-YT-1), which is belong to HEV genotype 4d isolated in the same geographical region. The other one shared 97% nucleotide identity with SWXJ-03(4 h). However, all the feces samples can be detected HEV RNA copies ( $5 \times 10^1 \sim 5 \times 10^8$  copies/ml) by real time PCR. Moreover, the samples with higher ALT (>1000U/L)/AST (>500U/L) levels, the high HEV copies were detected ( $5 \times 10^6 \sim 5 \times 10^8$  copies/ml), and also with HEV antigen positive.

**Conclusion:** The results confirmed the possibility of zoonotic transmission of HEV genotype 4 between the main local animal reservoir pig and human populations in Shandong province. The HEV RNA copies and ALT/AST level as well as HEV antigen has a positive linear correlation, providing a valuable reference for early diagnosis and treatment of hepatitis E.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1235>