domonas and can potentially be used as a carbapenem sparing agent. Further clinical studies are required to validate these in vitro results.

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### Evaluation of influenza RT-PCR assay competency

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**Background:** Influenza A and B are the most prevalent influenza viruses around the globe. The real time RT-PCR is used to rapidly identify the viruses in nasal and/or throat swabs. The test including the viral genome extraction and the target gene amplification steps is needed to be performed very carefully to provide good sensitivity and specificity as well as to avoid contamination. Evaluation of the assay performance is indispensable. AFRIMS initiated a pilot program and assembled sample panel composed of characterized influenza A subtype H1 and H3 and influenza B samples which were distributed to four sites. This panel aimed to evaluate the performance of the lab and its personnel at all sites and evaluate the quality of the panel's consistency over the past three years.

**Methods:** AFRIMS prepared three trials of quality control panels to detect influenza A and B during three consecutive years (2009-2011). Each control panel consisted of 10 samples containing different concentrations of heat-inactivated influenza viruses. One panel comprised of coded numbers of influenza A, H1, high and low concentrations; influenza A, H3, high and low concentrations; influenza B, high and low concentrations; and four negative samples. The panels were sent to four sites and tested by using Rotor-Gene Thermal Cycler platform.

**Results:** The results of cycle threshold values (Ct) were analyzed. The trials' standard deviation (SD) and coefficient of variation (% CV) of Ct value from each positive sample were calculated. Ct data from 2009 to 2011 had SD and % CV between 1.03 -2.03 and 1.06% - 4.16% respectively. Total datasets were concordant 90.50% of the time (86/95). The rate of false positive and negative results varied from1 to 6.3% over the past three years depending on the virus subtype.

**Conclusion:** The coefficient of variation values obtained from all trials were consistent with other quality assessment studies that reported % CV generally less than 8%. Further on-site and refresher course training should be held periodically to decrease false positive and negative results. Both the panel provider and lab personnel must strictly follow SOPs in order to minimize variations and errors of testing.

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### Success rate of direct sputum smear microscopy (DSSM) for AFB among psychiatric patients in a Philippine government Psychiatric healthcare facility

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**Background:** The transmission rate of pulmonary tuberculosis among patients in mental institutions can be as high as sixteen-times more than that of the general population. Although the Tuberculosis Program (NTP) of the Department of Health (DOH) recommends direct sputum smear microscopy in diagnosing active tuberculosis, chest radiographs remain the primary method for detecting TB in psychiatric patients confined in mental hospitals due to uncooperative/aggressive behavior. The rate of case detection through sputum microscopy in these patients has yet to be determined.

This study aims to determine the percentage of patients, admitted in the NCMH-TB Pavilions for the period of June 1, 2010 - May 31, 2011, able to provide adequate sputum samples for the microbiologic diagnosis of tuberculosis.

**Methods:** Two hundred and sixteen (216) patients diagnosed with pulmonary tuberculosis through chest radiographs were included in the study. Three sputum specimens were submitted by all subjects under the instruction and direct observation of TB DOTS-trained nurses, following the Department of Health protocols, regarding sputum collection. Sputum samples were classified as either adequate for culture or inadequate (<10 epithelial cells/hpf). Samples were subsequently examined using Ziehl Neelsen staining procedure to identify the presence of acid-fast bacilli regardless of their adquacy for culture.

**Results:** Of 216 patients, 174 (81%) were able to provide adequate sputum samples for the diagnosis of tuberculosis. From these, 37 (17%) tested positive for acid fast bacilli in their sputum at least once during 3 collections. Forty-two patients (19%) were not able to provide adequate specimens due to behavioral difficulties.

**Conclusion:** Direct sputum smear microscopy is a method that would aid in the diagnosis of active pulmonary tuberculosis among patients with psychiatric disorders.

Such technique avoids the over diagnosis of the disease, as seen when chest radiographs are solely utilized. However, given the cross-sectional design of the study, associations between the ability of the patients to provide samples and chronicity/severity of the disease cannot be made.

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