

## **Creating a safe environment for patients and staff in the Bronchoscopy theatre at Universitas Academic Hospital.**

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### **Background and Objectives**

Health care workers (HCW) are in direct contact with TB infected patients in Bronchoscopy theatre where invasive procedures are done putting them at high risk of acquiring TB. The aim of the study was to improve the TB prevention and control knowledge and practice of HCWs in the Bronchoscopy theatre. It was further aimed to screen coughing patients on admission and provide them with surgical masks and pamphlets on cough etiquette. Additionally, it was aimed to perform a risk assessment and provide related recommendations.

### **Methods**

Knowledge and practice questionnaires were issued to all 14 HCWs who work in the Bronchoscopy theatre to evaluate knowledge and practice of TB transmission and infection control. Training was developed and performed based on the results, along with a post survey. Pre and post physical observations were conducted to evaluate infection control practices in the Bronchoscopy theatre and waiting room. An environmental risk assessment was done of the theatre using a checklist. Theatre staffs were trained based on the findings of the knowledge questionnaire and observations. Pamphlets were developed and distributed to patients in waiting areas.

### **Results and Discussion**

A major improvement from 46% to 83% compliance rate with adherence to correct principles of infection control was observed. By analysing the knowledge questionnaire it was found that although 79% knew that they should wear N95 respirators in the theatre, observations indicated that only 22% wore it. Only 14% knew that clean hands are the most important method to reduce the spread of infection. The results of the practice questionnaires corresponded with the post-observation survey. Environmental risks identified were overcrowding, poor ventilation, no negative pressure, lack of hand-washing facilities and cluttering of surfaces.

### **Conclusion and Recommendations**

These findings suggest that training is important to improve infection prevention and control practices and ensure a safe environment. Several recommendations have been made, including that the Bronchoscopy theatre should be moved to the operating rooms, that a DVD should be developed on the procedure for medical and nursing students to prevent overcrowding in the theatre and advice management on formulation of policy on our findings. Although staff knowledge is adequate, continuous training and assessment of environmental risks is necessary.