Background and Rationale
The information on the prevalence of fungal infections is scanty. Tinea capitis is common in children, being predominant in those of African descent (Moore & Suite, 1993). *Histoplasma capsulatum* is endemic in the islands with a 69% skin positivity rate in those <60 years old (Ajello et al. 1962; Hay et al. 1981). Three cases of cutaneous histoplasmosis in AIDS patients have been reported (Barton et al. 1988). An outbreak (3 cases) was reported among German biologists following exposure to bats in a cave in Trinidad (Jülg et al. 2008). We estimated the burden of fungal infections in Trinidad and Tobago (T&T) from published literature and modelling.

Methods
We extracted data from published papers on HIV infection and the WHO STOP TB program and UNAIDS. Where no data existed, we used specific populations at risk and fungal infection frequencies in those populations to estimate national incidence or prevalence. Estimates of invasive mycoses, and allergic bronchopulmonary aspergillosis (ABPA) and severe asthma with fungal sensitisation (SAFS) complicating asthma in adults and chronic pulmonary aspergillosis (CPA) rates were made on assumptions based on incidence rates reported in the local and international literature. The denominator included the overall T&T population, number of patients with HIV/AIDS and respiratory diseases.

Results
The T&T population was estimated to be 1,339,000 million people (2009), of whom 21% are children (0-14 years) and 10% are >60 years old. Asthma prevalence (wheezing in the last 12 months) is 13.2% in adolescents (11-19 years old) and assumed to be the same throughout adulthood; an estimated adult asthma population of 139,631. Using a 2.5% rate of allergic bronchopulmonary aspergillosis (ABPA) based on other studies including one from South Africa, T&T has 3,491 ABPA cases and 4,608 SAFS cases. In contrast, chronic pulmonary aspergillosis is uncommon with an estimated prevalence of 27 cases after TB (2/100,000), as few cases of TB are found on T&T, perhaps 25% of the total chronic pulmonary aspergillosis (CPA) caseload. An estimated 23,763 women have >4 attacks of vaginal candidiasis annually (6% women >15 yrs, based on a Nigerian rate). Using a common international figure for candidaemia incidence of 5/100,000, 87 cases of candidaemia occur each year, and 10 cases of Candida peritonitis in surgical patients. An estimated 14,000 people are infected with HIV in T&T; an adult prevalence rate of 1.1%, of whom at least 5,000 are not on anti-retroviral therapy (<350 CD4/uL). Assuming 10% of those not on ARVs progress to a life-threatening opportunistic infection each year, and that the rate of pneumocystis pneumonia (PCP) is 80%, 400 PCP cases and 50 cryptococcal meningitis would be expected in AIDS annually. It wasn’t possible to estimate the burden of histoplasmosis because of paucity of data, but it certainly exists as several small series have been reported. Likewise invasive aspergillosis, mucormycosis and fungal keratitis caseload could not be estimated.

Conclusion
Using local data and literature estimates of the incidence or prevalence of fungal infections, over 35,000 people in T&T are estimated to suffer from serious fungal infections each year. Local epidemiological studies are urgently required to validate or modify these estimates.

References