

# The burden of serious fungal infections in Sri Lanka

Primali I. Jayasekera <sup>1,2</sup>, David W. Denning <sup>2</sup>, P.D. Perera <sup>1</sup>, Amitha Fernando <sup>3</sup>, Sadara Kudavidanage <sup>1</sup>

<sup>1</sup> Department of Mycology, Medical Research Institute, Colombo, Sri Lanka.

<sup>2</sup> The University of Manchester, UK, in association with the LIFE program ([www.LIFE-worldwide.org](http://www.LIFE-worldwide.org)).

<sup>3</sup> Central Chest Clinic, Colombo, Sri Lanka.

## Objectives

Estimates of fungal infection caseloads are required to plan and implement healthcare policies. Being a tropical island situated in the Indian Ocean with a population of 20 million, Sri Lanka offers free health care with a specialized medical institution in each district. The estimation of national fungal infection caseloads using epidemiological datasets, was a necessity due to recent increase in elderly population and medical developments.

## Methods

National data available from the Sri Lankan department of census & statistics, Ministry of Health, WHO & Faculty of Medicine, Colombo, as well as surveillance studies published by us and other authors and locally collected data were reviewed. Disease estimates were conservative as they assumed the lowest incidence rates reported in the literature and focused only on well-defined risk populations.

## Results

Infection	Number of infections per underlying disorder per year					Total burden	Rate /100K
	None	HIV/AIDS	Respiratory	Cancer/Tx	ICU		
Oesophageal candidiasis	-	97	-	-	-	97	0.5
Oral candidiasis	-	320	-	-	-	320	1.6
Candidaemia	-	-	-	203	304	507	2.3
Candida peritonitis	-	-	-	-	76	76	0.3
Recurrent vaginal candidiasis (4x/year)	25,750	-	-	-	-	25,750	116
ABPA	-	-	10,344	-	-	10,244	50.5
SAFS	-	-	13,654	-	-	13,654	67.4
Chronic pulmonary aspergillosis	-	-	2,886	-	-	2,886	13
Chronic pulmonary aspergillosis post TB	-	-	1443	-	-	1443	6.5
Invasive aspergillosis	-	-	102	127	-	229	1
Mucormycosis	41	-	-	-	-	41	0.2
Cryptococcal meningitis	5	3	-	5	-	13	0.05
Pneumocystis pneumonia	-	-	-	-	-	?	?
Histoplasmosis	-	-	-	-	-	-	-
Fungal keratitis	1,277	-	-	-	-	1277	5.8
Tinea capitis	50	-	-	-	-	50	0.22

## Conclusions

Our estimates suggest that candidaemia and invasive aspergillosis are the leading causes of fungal-associated deaths. Fungal related morbidity is mainly attributed to SAFS, ABPA and CPA. More precise data from the whole country is needed for healthcare policymaking.