

95/95 BY 2025

ENSURE THAT BY 2025
95% OF PEOPLE WITH
SERIOUS FUNGAL DISEASE
ARE DIAGNOSED AND
95% TREATED = 95-95



Appendix 6

Public health mycology, training institutions and skill gaps

One of the challenges for the subject is the broad range of medical specialties in whom some knowledge of fungal disease is required and provision of training for each requires a tailored approach. Beyond a basic competence necessary for each practitioner in each medical discipline, interest and expertise is required to cross the specialty boundaries and provide local and national leadership. Often the pharmaceutical industry has provided leadership and financial support in this area, with scholarships, training days and talks from external experts and preceptorships. These tend to be most supported where the market growth potential is largest, and has included systematic diagnostic support, omitting most LMICs. Few clinical training centres exist (Table 6.1).

Postgraduate courses and training

Only 2 Masters programs are available worldwide, London and Manchester. Very little is taught in public health and global health courses about fungal diseases. Research study for research masters and PhD programs are occasionally available, as are post-doctoral positions. Public health training for specialists rarely includes medical mycology.

There are numerous shorter courses for training in clinical and basic science aspects of medical mycology (many listed here: www.life-worldwide.org/medical-community/courses-training). Several specialist conferences are also held, usually biennially, for topics within the subject.

Major gaps in skills – health systems and health economics research

There are exceptionally few experts focused on quality of life and such metrics as Disability-Adjusted Life Year (DALY), Quality-adjusted life year (QALY) and other commonly used measures of disease impact. The literature is sparse.

The medical mycology community is not integrated at all with the health systems and health economics communities. Several papers are published on the costs of invasive aspergillosis and invasive candidiasis in the USA and Europe, but these have been focused on justifying the relatively high acquisition costs of new antifungals, rather than examining the economics compared with other diseases in LMICs.



David Perlin, Juan Luis Rodriguez Tudela and David Denning from GAFFI, following a visit to WHO TB program.



GAFFI. Meeting with the minister of health in India, after discussing a national plan for mycology reference labs.

www.gaffi.org/gaffi-leaders-highlight-indias-plight-as-fungal-infection-capital-of-the-world



Infocus Curitiba. Promoting the educational content of LIFE in english and in spanish in Curitiba in September 2015, as well as GAFFI.

OUR VISION IS TO REDUCE ILLNESS AND DEATH ASSOCIATED WITH FUNGAL DISEASES WORLDWIDE



Appendix 6/2

Public health mycology, training institutions and skill gaps

Country, Institution	Primary funding	Objectives
China, Peking Union Hospital	Grant	National reference laboratory for <i>Candida</i> identification and susceptibility testing, multicenter study.
Denmark, Serum Statens Institute	Government	Rare pathogen identification, development and provision of specialized diagnostic assays, resistance surveillance, training.
France, Pasteur Institute	Government, grants	Fundamental research, diagnostic test evaluation, training, national epidemiology data collection and reporting.
India, Postgraduate Institute for Medical Education and Research	Government, grants	WHO Collaborating Centre for medical Mycology, specialised diagnostic testing and identification of unusual fungi, clinical centre, focus of multiple national epidemiology studies, resistance surveillance, training.
Japan, National Institute of Infectious Diseases	Government	National mycology epidemiology program, with an emphasis on chronic pulmonary aspergillosis, and autopsy data.
South Africa, National Institute for Communicable Diseases	Government, grants	Provision of specialized diagnostic assays, epidemiology studies with a focus on cryptococcal disease, coordination of cryptococcal antigen screening program, training.
Spain, Instituto de Salud Carlos III	Government, grants	Rare pathogen identification, provision of specialized diagnostic assays, resistance surveillance, training, outbreak control, epidemiology surveillance data, basic research.
Sudan Mycetoma Research Centre	Government, charity	National and international clinical and research centre for mycetoma.
UK, National Aspergillosis Centre	Government	Clinical and laboratory diagnostic centre for chronic and allergic aspergillosis, research and training.
UK, Public Health England	Government, grants	Voluntary candidaemia data collection and reporting, rare pathogen identification, resistance surveillance in <i>Candida</i> , training.
USA, CDC	Government	Outbreak control, field epidemiology, provision and development of specialized diagnostic assays, identification of rare fungi, national reporting, training and international health (focus on cryptococcal meningitis and histoplasmosis).



We must develop programs for education, training and for updating the medical and biomedical community. These programs should incorporate Universities, private and public hospitals and major centers for diagnosis, hold international web seminars led by experts, facilitating distance learning via new media/web technologies.

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