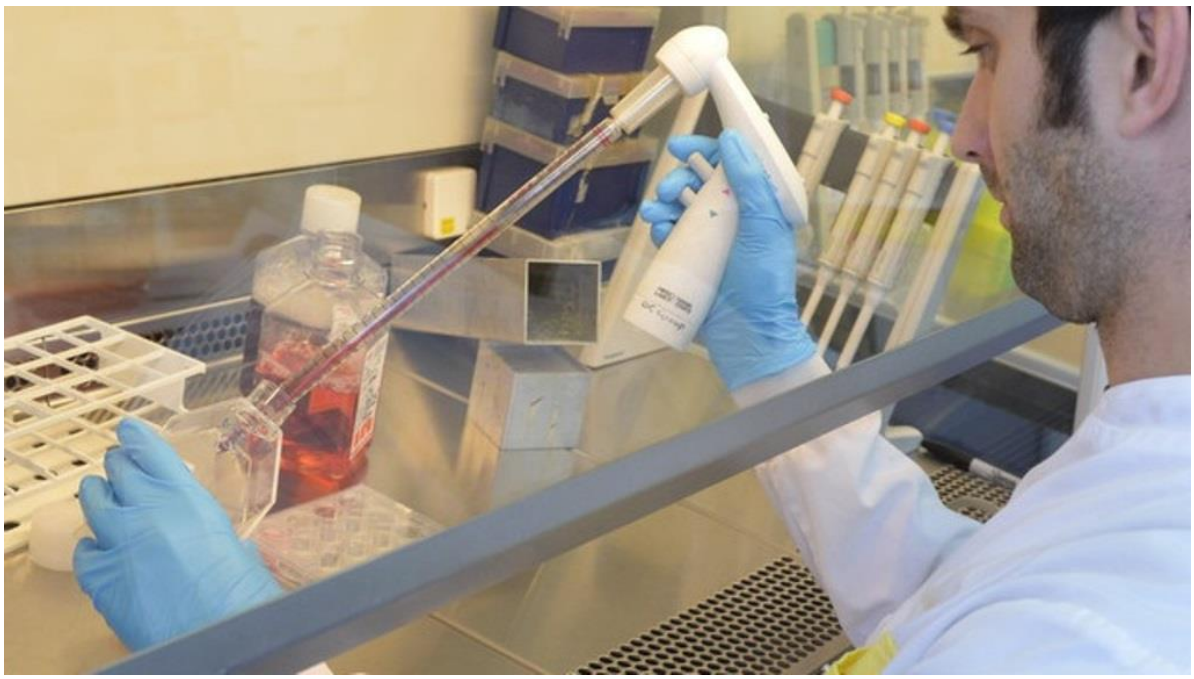
Optimising the prevention and management of HIV associated cryptococcal meningitis

Researchers from St George's have evaluated and optimised anti-fungal therapy for cryptococcal meningitis, the commonest cause of adult meningitis in sub-Saharan Africa. These advances have led to changes in and development of a series of international guidelines and application of these new strategies in parts of Africa.



Cryptococcal disease in HIV infected adults, adolescents, and children" published in 2011, and the Southern African guidelines published in 2007 (updated in 2013).

The impact of adopting these recommendations in resource-limited settings is a reduction in the 10-week mortality from over 50 per cent to 25-35 per cent when amphoteracin B based treatments are used. This is achieved through wider use of standard amphotericin B induction, and of effective but also affordable and sustainable alternatives.

The cost comparisons, lobbying and advocacy initiated by the study team caused the pharmaceutical company Bristol Myers Squibb to reduce the price of amphotericin B in South Africa by 80 per cent (146 to 26 ZAR/50mg vial). This has resulted in the use of amphotericin B (as opposed to fluconazole) for induction therapy being increased from an estimated 34 per cent of patients in 2005 to 83 per cent in 2010. Based on the work of the group, and in line with the international guidelines, an increasing number of Sub-Saharan Africa countries have adopted 1200 mg/d as the standard fluconazole dose, with the effect that this dose is now routinely used in initial therapy throughout those countries.

Following the evidence produced by the St George's group, the Department of Health in South Africa has agreed to a phased implementation of the introduction of a screen and pre-emptive

treatment strategy for cryptococcal meningitis in newly diagnosed HIV patients. In many African centres this now represents over half of all cases.

This was incorporated into the 2012 Department of Health strategic plan following meetings in Pretoria in February 2011 with CDC, PEPFAR representatives and Harrison.

Of note is that a cost-effectiveness analysis demonstrated that screening has become the optimal standard of care – i.e. it both saves lives and saves money (through a reduction in costs associated with caring for patients).

Screening is now in routine use in South Africa's Western Cape and Gauteng provinces; further projects based on this strategy are being implemented in Uganda, Kenya, Zambia, and Tanzania. Screening, using the new point-of-care diagnostic test, was endorsed by the 2011 World Health Organization (WHO) guidelines for areas of high prevalence and recommended in the updated 2013 Southern African Clinicians Society guidelines.

Effective screening with subsequent treatment substantially reduces the number of cases of cryptococcal meningitis presenting after a diagnosis of HIV has been made and anti-retroviral therapy started, demonstrating the extensive reach and significance of this research.