

# ANTIRETROVIRALS



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Catherine Orrell completed her medical training and registrar time in clinical pharmacology at the University of Cape Town. She has been key in the setting up of two of the Western Cape anti-retroviral roll-out sites and contributed to the Western Cape ARV guidelines.



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Marc Blockman has been involved in the science of pharmacology and its application to clinical medicine for 22 years. He serves on the Medicines Control Council Committee of South Africa, and is Chairman of the Essential Drugs Programme. He serves as an International Consultant for the WHO and is Deputy Chairman of the Health Sciences Faculty Research and Ethics Committee.

Approximately 53 million individuals worldwide have been infected with the HI virus. More than 34 million are still alive today. AIDS deaths reached a record 2.6 million in 1999, and new infections continue practically unabated. The burden of HIV is not equally spread. Most befalls sub-Saharan Africa, with 10% of infected people living in South Africa alone. In southern Africa life expectancy is expected to drop from 59 to 45 between 2005 and 2010.

While prevention is the most important strategy for managing the AIDS epidemic in the long term, we cannot lose sight of the fact that millions of young people are living with the infection today. These economically active people are key to societal functioning, as breadwinners and carers of children and the elderly. Without intervention they will all eventually become ill, becoming a drain on the resources of their families, social services and health care systems.

Only a few interventions have been shown to have an impact on the morbidity and mortality of people living with HIV:

- Experience of health care workers in giving care to HIV-infected individuals has been shown to reduce morbidity and mortality in both the pre-antiretroviral and antiretroviral eras, perhaps because of more prompt and appropriate responses to the management of opportunistic infections such as tuberculosis.
- The use of prophylactic medicines for opportunistic infections is key to morbidity and mortality. This includes the use of co-trimoxazole in the prevention of *Pneumocystis carinii* pneumonia (PCP) – a cost-effective intervention that reduces morbidity and mortality in symptomatic HIV-infected individuals.
- And, key to this issue, the introduction of antiretroviral therapy in both prevention of mother-to-child transmission programmes and as long-term therapy to infected individuals makes an enormous impact on the present and future health of people living with HIV and their children.

This issue of *CME* gives an overview of the use of antiretrovirals in South Africa today. A gloomy predication of 80% mortality within 2 years for a person with a CD4 count of < 200 cells/ $\mu$ l can be improved to a potential quality life of 15 years or more for an adherent patient on correctly managed antiretroviral therapy (ART). Many of us have seen our terminally ill patients return practically unrecognisable in their newfound good health only a few months after starting ART. These medicines give hope not only to the individual but also to their families and the community. Treatment programmes will assist to reduce the fear and stigma linked to HIV and encourage people to know their HIV status, as we have moved into the era when 'living with HIV' is more than an euphemism.

It is not difficult to manage a patient on long-term ART. There are a few simple rules to follow:

- Always use 3 drugs in an established regimen – the naïve patient has the best chance of durable viral suppression. Make the most of this single opportunity!
- Dose the medication as indicated on the package insert. Both over- and under-dosing can be extremely harmful and could result in toxicity or early drug resistance with the potential loss of a drug group (and a few years of somebody's life).
- Support people in being > 95% adherent – often best done by a counsellor who speaks the same language as the patient and has the time to spend in education and encouragement.
- Ask for help if you encounter a problem! The Medicines Information Centre ARV Hotline is available on 086-110-0531 or (021) 406-6829.

Briony Chisholm and Tamara Kredo cover the basics of antiretrovirals and how to piece the drugs together into a triple-therapy regimen. Karen Cohen looks at the National Antiretroviral Programme protocol and describes how this structured system manages the dually infected HIV-TB patients as well as the HIV-positive pregnant woman. Francois Venter and his team discuss the more common and severe toxicities linked to long-term ART, and Graeme Meintjes describes the HIV resistance to ART (and how to avoid it!). The paediatric team give clear guidelines through the complexities of managing a child on ART. Robin Wood reviews new therapies in the development pipeline – drugs that may broaden our treatment horizons in the next few years. Rudy Onia tackles the issues of people using, as many do, traditional medication while on ART. And lastly, Fareed Abdullah, of the Western Cape Department of Health, examines factors that may contribute to the success of South Africa's groundbreaking national expanded access antiretroviral programme.

Many thanks to all the authors for their efforts. I hope everyone enjoys this valuable issue.