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EDITORIALS

Promoting long term adherence to antiretroviral treatment

Patient support and community interventions are probably the best interventions

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While funders start to backtrack on financial commitments to tackling the AIDS epidemic,[1] the HIV research community is rallying because important steps are currently being taken in treatment, prevention, and the combination of the two.[2] Not since antiretroviral treatment first became available have expectations been so high that its widespread use can break the back of the global AIDS pandemic. Research into an HIV vaccination has been funded for more than a decade, but long term antiretroviral treatment is still the most effective biomedical prevention tool available.[2]

For antiretroviral treatment to work as a preventive measure, however, patients must consistently adhere to treatment, yet our understanding of how to achieve widespread optimal adherence is still limited. Most people who take antiretroviral drugs reside in Africa—currently, more people in the small country of Zambia (283<thin>000) are taking these drugs than in the whole of the United States (268<thin>000).[3] Although most patients in Africa adhere extremely well to treatment,[4] a proportion of patients do not. It is important that all patients are adherent to avoid the emergence of drug resistance, because it is not clear that first line drug combinations that are widely used in resource limited settings offer adequate protection against drug resistant strains.[5] On a positive note, the risk of treatment failure declines with increased duration of disease suppression with antiretroviral drugs, regardless of level of adherence,[6] which means that less expensive first line regimens can be used for longer and transmission to others prevented.[2]

Extensive research has examined interventions aimed at reminding patients to take their drugs, through memory tricks, beepers, or direct observation.[7] However, emerging evidence indicates that these techniques may not work well, and that efforts should be channelled in a new direction. Patients with poor adherence to long term treatment usually experience major impediments to healthy behaviour in their lives. For example, when patients are unable to provide food for their family or schooling for their children their own health may become a secondary concern. When patients have not disclosed their HIV status to a partner it may be difficult for them to collect their drugs or maintain their drug taking schedule. Even if patients want to adhere to treatment they may not be able to when pharmacies are out of stock.[8] In such cases, reminders to take drugs may be redundant and may even reinforce a self perception of failure.

A non-interrupted supply of drugs is key. However, a more supportive environment may be the best approach to helping patients overcome challenges to adherence. The authors of a qualitative study on adherence in sub-Saharan Africa termed such an approach—social support networks that encourage patients to be vigilant about their health—the social capital of adherence.[9] This may explain why patients who have disclosed their HIV status to their partners have high levels of adherence and why interventions aimed at community level involvement in adherence result in relatively low levels of mortality and loss to follow-up.[2 10] A two year follow-up of community antiretroviral treatment group care in rural Mozambique found 92% adherence, mortality at just 2%, and that only 0.2% of patients were lost to follow-up.[10] These excellent outcomes are the result of a programme that encourages self sufficiency and mutual support, a very different approach to the more usual health worker intervention for adherence.

Agencies such as the AIDS Support Organization (TASO) and the Family Treatment Fund in Uganda, as well as AMPATH in Kenya, have long been aware of what drives adherence and have launched initiatives that have included microfinance opportunities, skills training, and drama groups to promote positive living and encourage healthy social behaviours.

Can advances in technology help with adherence to treatment? There is excitement about harnessing technology to provide reminders, support, or monitoring systems for adherence.[7] Most recently, mobile phones communications between health workers and patients resulted in improved adherence and viral suppression.[11] It is unclear whether improvements were due to

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the reminders or the support of health workers. Real time drug adherence monitors, which record removal of a patient's drug bottle cap, are an innovative step towards monitoring patients who are difficult to reach. Such monitors are unlikely to be widely implemented because of high costs, and possible opposition from patients, but they may be useful for patients with specific challenges.[12] The use of technology to facilitate social support may be a powerful approach.

Research into adherence to antiretroviral treatment should now move towards testing interventions that could make a difference. Few randomised trials have evaluated support strategies and their effects on adherence. However, because long term adherence is necessary for treating HIV and preventing transmission, and as funding becomes uncertain, it becomes increasingly important to harness social capital because it is cheap and adaptable to local environments, and it probably offers the best return on investment in terms of conferring clinically important health benefits.

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