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Views and Practice

Putting in practice treatment as prevention

Scientific Committee on AIDS and STI

Introduction

Despite the scale of the epidemic, the routes and settings of HIV transmission are well known. Strategies have also been developed for effective prevention, as in Universal Precautions,[1] (now termed Standard Precautions) for the health care setting, harm reduction approach for injecting drug use, and safer sex, especially the condom barrier protection, for sexual transmission. Thereafter the introduction of the clinic-based HIV prevention package for the infected patient further solidified the overall prevention effort.[2] The optimism, however, was short-lived.

Today, a rising epidemic demands new ideas to be added to this prevention package. A prime candidate is using HIV treatment as prevention. This has long been known to reduce HIV infectivity by suppressing viral load. In early studies of mother-to-child transmission, low maternal viral load was associated with decreased transmission. Subsequently in the HPTN052 clinical trial, it was shown that transmission to a sero-discordant sexual partner was reduced by 93% if the index patient was put on treatment. Importantly, *no* infection occurred if the viral load was suppressed.[3]

Scientific Committee on AIDS and STI

Correspondence to: Dr. KCW Chan
Secretary, Scientific Committee on AIDS and STI

Integrated Treatment Centre, 9/F, 9 Kai Yan Street, Kowloon

Mathematically speaking, extensive HIV testing that captures all HIV-infected patients for treatment could reverse the epidemic itself.[4] This is however easier said than done. A series of difficult requirements quickly emerged: reaching at risk populations for regular and frequent testing; engaging and retaining patients in care; treating them; maintaining near-perfect adherence, and ultimately suppressing viraemia.[5] Inability to fulfill these requirements will allow 'leakages' in the so-called Cascade of Care, in which proportions are estimated for the sequential stages of diagnosis, engagement, retention in care, treatment and viral suppression.[6]

The Hong Kong Scientific Committee on AIDS and STI (SCAS) has recently published a new set of recommendations :*Recommended Principles and Practice of HIV Clinical Care in Hong Kong*.[7] A total of six principles were enumerated.

1. Practice of HIV medicine requires special expertise for optimal care.
2. Effective HIV care requires a multi-specialty and multi-disciplinary team approach.
3. A clinic-based, tailored package of prevention interventions should be delivered to the patient.
4. There should be equitable access to high quality care which is conducive to retaining patients.
5. All rights of the patient should be respected.
6. There should be community support, participation and acceptance.

These recommendations define how HIV clinical care should be delivered. A key message is that the care provider has a dual responsibility to public as well as clinical health. Put into practice, this framework of care will not only enhance clinical outcome, but greatly increase the prospects of a leakless Cascade of Care and benefit the overall prevention effort in Hong Kong.

With increasing patient longevity, we have witnessed the emergence of cardiovascular, neurological, metabolic and other complications that may be more frequent or severe than that seen in the HIV-negative general population. Nowadays, the lead role is often assumed by the Infectious Disease specialist in an HIV clinic, and rightly so for the specialised knowledge required. However, the engagement of multiple disciplines and specialists will be crucial for effective care. This engagement should be more generalised, involving hospitals and professionals other than the initial designated referral centres. Of note, there has been a gradual involvement of the private sector in certain aspects of HIV care, a development that could be leveraged for broader involvement of the medical community.

HIV care should be larger than dispensing of drugs and management of adverse drug effects. In tandem with medical treatment should, a full package of prevention services appropriate to the individual patient should also be included. It ranges from behavioural risk counselling, partner counselling and referral, STI screening and treatment, a harm reduction approach toward substance use, to essentially every approach that will curtail onward transmission of HIV. Some physicians have a fatalistic belief that counselling does not work, which is not true.[8] Some others may be ill-at-ease to broach such sensitive issues. These obstacles have to be overcome.

That treatment prevents makes it an integral strategy of HIV prevention. However, it is fallacious to assume patients will all stay in care and adhere to treatment. Barriers abound, in the form of depression, difficult social circumstances, substance use, and misunderstanding of disease or treatment. To successfully engage, retain and treat patients therefore requires more than high quality medical care. All factors hindering retention should be proactively assessed for and effectively dealt with. In this process, one should not forget that discrimination against patients exists. Patient privacy and autonomy will have to be fully respected.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) has launched the global initiative of reaching 90-90-90 by 2020. This is an achievable target in which 90% of all HIV infected patients know their diagnosis, 90% of the diagnosed will be on treatment, and 90% of the treated will have suppressed viraemia.[9] This is also a campaign in which the medical profession should take centre stage. The responsibility for reaching the very first 90 falls on the entire medical community who should be aware that screening for HIV in the health care setting is encouraged.[10] The other two 90s will require commitment on the part of care providers along the recommended principles. Although there is no guarantee that the target can be reached by 2020, efforts made towards this end will certainly confer tangible benefits on our patients.

Declaration

There is no conflict of interest for the authors. The opinions and assertions contained herein are private views of the authors and do not necessarily reflect those of the Centre for Health Protection, Hong Kong Department of Health.

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