Know, treat, prevent – HIV testing, a key strategy in the prevention and control of the HIV/AIDS epidemic

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Nearly 30 years ago, human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) emerged as a new infection/disease and have since been a major concern for public health worldwide due to its associated morbidity and mortality. Considerable research and efforts have been undertaken to find and implement the best ways to prevent the spread of HIV and cure the disease AIDS. While there is still no effective vaccine, prevention programmes targeted at reducing risky behaviours have helped prevent the feared explosion of the epidemic in European Union (EU) and European Economic Area (EEA) countries. In addition, development of new antiretroviral drugs and early treatment of newly detected cases have contributed considerably to the reduction in associated morbidity and mortality since the mid-1990s. Still, there is no effective cure yet and while antiretroviral treatment is improving quality of life, there are concerns about the increasing number of HIV infections in certain groups, for example, among men who have sex with men (MSM) in several EU countries [1] and the fact that the number of other sexually transmitted infections (STIs) is also increasing in this group [1,2].

A year ago, a special theme issue of *Eurosurveillance* highlighted specific aspects of HIV and other STI in MSM. Today's issue of the journal draws attention to the latest figures on HIV/AIDS in EU/EEA countries that were released on World AIDS Day 2010 (1 December) in a report on HIV/AIDS surveillance in Europe in 2009, published by the European Centre for Disease Prevention and Control (ECDC) [3,4]. They demonstrate that in 2009, more than 4,500 newly diagnosed AIDS cases were reported by 27 EU/EEA countries; in addition, nearly 26,000 diagnosed cases of HIV infection were reported by 28 such countries. Overall, AIDS is decreasing in almost all EU/EEA countries, except in some eastern European countries, and this trend reflects the wide availability of antiretroviral treatment and care.

In the general population the rate of HIV infection remains relatively low, but infection rates are high in certain population groups, e.g. MSM, individuals from countries with generalised HIV epidemics, and

injecting drug users, with the largest increase in HIV infections among MSM.

The drivers of the HIV/AIDS epidemics are remarkably distinct between EU/EEA countries: while in many countries MSM are the most important risk group, in Bulgaria, Estonia, Latvia and Lithuania, injecting drug users are the main risk group. Knowledge about these drivers is of utmost importance in designing effective preventive strategies.

In 2009, the number of cases of HIV infection increased in 16 countries, while it decreased in only 12, when compared with 2004 data. These figures – together with the fact that an estimated 30% of infected persons are unaware of their HIV infection [5] and may not take the necessary precautions (such as practicing safer sex) to prevent transmission to others – show why HIV/AIDS remains an important public health issue and will stay in the focus of ECDC's attention.

HIV testing, early diagnosis and access to treatment are key strategies for HIV/AIDS prevention. Individuals who are unaware of their infection are at risk of progression of the disease, severe complications and possibly death from AIDS, as they cannot benefit from treatment. There is growing evidence that widespread access to treatment may reduce HIV incidence by reducing viral load at population level [6,7]. In addition, a meta-analysis showed that people diagnosed early may be less likely to transmit the virus [8].

The paper by Likitavicius and Van de Laar in this issue [3] also highlights the considerably high proportion of so-called 'late presenters' – people who present with an HIV infection that is already advanced so that the opportunity for timely access to treatment and care is missed. It reveals that HIV testing should be offered to those at risk to ensure early diagnosis and thus better prospects for reduced illness and prolonged life.

On the occasion of World AIDS Day 2010, ECDC also presented a synthesis of evidence on HIV testing, based on a literature review, and a report pointing out the need to scale up HIV testing in the EU, including

the screening of pregnant women to reduce mother-to-child transmission [9,10]. These reports show that HIV testing is an important tool to prevent further transmission and to enable early diagnosis for timely referral to treatment and care. Furthermore, the guidance describes core principles that should be considered in national testing strategies and steps to be taken when setting them up. The reports were launched during a scientific seminar at the European Parliament that was attended by many stakeholders who engaged in a lively debate demonstrating interest and support for our work. 'Know, treat, prevent' has been ECDC's motto for this year's World AIDS Day. To continue the efforts to reverse the trend of increasing numbers of HIV infections in Europe and elsewhere, concerted action is needed. In this respect it is vitally important to bring HIV testing closer to those at high risk, while simultaneously avoiding stigmatisation of and discrimination against people living with HIV/AIDS.

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