HIV INFECTIONS IN BELGIUM: CONTINUOUS INCREASE IN HIV DIAGNOSES IN MEN WHO HAVE SEX WITH MEN

INTRODUCTION

Re-emergence of HIV epidemic and continuous high notification rates of newly diagnosed HIV cases in men who have sex with men (MSM) have been observed in many Western European countries. Diagnoses of concurrent other sexually transmitted infections (STI) have also increased substantially in this risk group. Belgium is currently experiencing an upward trend in the number of new HIV diagnoses characterised by a continuous increase in the number of cases among MSM. In this article, based on surveillance data collected by the IPH (Episcoop 2001, nr. 3), we describe the main trends and epidemiological features of HIV infections in Belgium.

METHODS

In Belgium, all serums with positive screening test results are submitted for confirmation to one of the seven AIDS Reference Laboratories. For each confirmed test, a form is sent to the patient’s clinician who provides anonymous data on age, sex, nationality, residence, sexual orientation, probable mode of HIV transmission and CD4 cell count (indicator of immunity) at the time of HIV diagnosis. Data are included in a HIV database maintained at the IPH.

RESULTS

In 2008, there were 1,079 persons newly diagnosed with HIV in Belgium. This is the highest number ever reported. During the period 2003-2008, a plateau was observed; the rate of newly diagnosed cases of HIV infection fluctuated between 96 and 102 per million population. Before this plateau phase, the rate of newly diagnosed cases had increased by 47%, from 69 per million in 1997 to 101 per million in 2003.

This plateau consists of 2 opposing trends in MSM and heterosexuals. In the past decade, the yearly number of new HIV diagnoses in MSM increased by 228%, from 101 cases diagnosed in 1999 to 332 cases in 2008 (Figure 1). During the same period, the trend in new HIV diagnoses in heterosexuals was reversed: in a first phase the yearly number of new diagnoses increased by 61%, from 298 cases diagnosed in 1999 to 480 cases in 2003; in a second phase, this number decreased by 27% to 350 cases diagnosed in 2008 (Figure 1).

In 2008, almost half of HIV diagnoses were in MSM (46%), even if heterosexual transmission remained the predominant reported mode of infection (48%). Only 2% of patients were infected by intravenous drug use (IDU). Transmission mode data were available for approximately 70% of new diagnoses. The majority of new HIV infections in MSM were diagnosed among Belgian citizens (72%), followed by other European nationalities (13%), American or Asian nationalities (8%) and sub-Saharan nationalities (3%). Among new diagnoses in heterosexuals, 59% were patients from sub-Saharan Africa, and 27% were Belgians.

Surveillance data suggest that HIV testing behaviour evolved in MSM and that a significant improvement was made regarding early HIV diagnosis during the last years. In this group, a steady and significant increase of CD4 count at HIV diagnosis was observed between 2001 and 2008 (2001: 395 cells/mm³, 2008: 526 cells/mm³; p<0.001), suggesting that HIV infections were diagnosed earlier in recent years.

DISCUSSION

In 2008, the number of reported new HIV diagnoses were in MSM was higher than ever since the beginning of the epidemic, including among young MSM. The increasing trend in Belgian MSM was continuous from 1999 until 2008. Changes in HIV testing may influence trends in HIV diagnoses. In Belgium, the increase in HIV diagnoses does not reflect an increase in HIV testing since the number of tests performed nationwide...
has remained stable over time. On the other hand, increasing trends may partially reflect changes in the targeting of most at-risk groups during the period 1997-2008. Indeed testing promotion campaigns focused on MSM have been launched in recent years. Testing behaviour of MSM could have changed, as suggested by the fact that MSM are diagnosed earlier in recent years.

The results of this surveillance corroborate recent studies indicating increasing prevalence of sexual risk behaviour among MSM, including those who are aware of their HIV-positive status.

It is essential to adapt and to reinforce prevention interventions aimed at risk groups. Development of behavioural surveillance and more qualitative research on reasons why people practise unsafe sex are needed in order to develop more effective prevention strategies.


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BACKGROUND
Information on contacts between the patient and the General Practitioner (GP) is nowadays usually stored in an electronic patient record (EPR). If those recorded data could be directly made available for analysis, this would open up huge opportunities for epidemiological and health services research as data from primary care are a rich and valuable source of information. Various initiatives have already been taken in Belgium to start collecting those data (e.g. Intego, REGM, IRDM). Also some existing networks (e.g. the sentinel network of general practitioners) consider to computerise their data collection on the basis of the EPR. A multidisciplinary research group from the IPH, the Université Catholique de Louvain, the Société Scientifique de Médecine Générale and Domus Medica, conducted a project called ResoPrim to closely examine possible use and quality of data from the EPR. The project was financed by the Federal Science Policy Office (Nr I2/AE/207 and Nr I2/2F/207).

OBJECTIVES
The ResoPrim project aimed 1) to explore the possibilities and limitations of using routine data extracted from the EPR for research, 2) to provide an individual feedback to the participating GPs and 3) to formulate recommendations to permit other networks to make progress. A first phase of the project aimed to answer 36 specific research questions, of which several were further investigated in a second phase. This article describes the methods and some results of the first phase, some of them validated by the results of the second phase. Additional analysis of the final ResoPrim research databases is still ongoing.

METHODS
In order to fulfill the study objectives, data provided by a temporary research network of GPs were collected, analysed and disseminated.

The project was carried out from 2003 to 2008 by the multidisciplinary research group. The Société Scientifique de Médecine Générale and Domus Medica also acted as trusted third parties to guarantee data confidentiality. The data collection was carried out in line with the Privacy Act requirements.

In 2003, the producers of 3 of the, at that time, 17 labeled EPR software packages for general practice were willing to participate in the network. In the first phase (2003-2005) a small number of GPs using these packages voluntarily participated. Data on epidemiology, quality of care, health economics and health information systems were collected prospectively (6 weeks) and retrospectively (the last 3 years). They were extracted in an automatic way (directly from the EPR) and validated by questionnaires including the same parameters. Furthermore, qualitative research was performed through focus groups and face-to-face interviews with the GPs to explore their motivations to participate in such networks. The GPs also had to complete surveys to assess their expectations and satisfaction on participation and feedback.

In the second phase (2005-2008) a larger network was created to provide a more in-depth analysis. GPs were selected at random from all Belgian GPs and proposed to participate. Data were collected partly through automatic data extraction from the EPR and partly through the use of a specific data input screen.

RESULTS
The network set up in the first phase involved 26 GP practices and 3 software packages. Retrospective data related to 22,730 patients and 203,128 contacts were collected and prospective data for 9,472 patients and 13,814 contacts. The network set up in the second phase involved 33 GP practices, 6 medical houses and 4 software packages (of which one also participated in the first phase). Due to the selection of the GPs on a few specific software packages, the sample was significantly different in terms of age, type of practice and university from all Belgian GPs, and thus the sample was not representative for them.

The overall quality of data was rather weak, mainly because of missing data. Therefore the use of routine EPR data cannot be recommended for epidemiologic or quality of care studies unless it is at least supplemented by a quality control assessment. Nevertheless, it appears that data quality can be improved, for instance by participating in ResoPrim-like research networks. Given these current restrictions, in the near future, the most promising fields for scientific usages of data extracted from the primary care EPR seem to be 1) network, and data quality assessment and 2) quality of care studies, for instance on the assessment of changes in GPs’ prescribing patterns. It is however not recommended to compare the global quality of care between individual GPs on the basis of these data.

The network appears to be a potential tool to assess or to manage the authorities’ health information policy such as encouraging the use of labeled software packages or of the Global Medical Record. The network provides for instance information on which functions within their labeled software packages GPs use in their daily practice, and on the influence of the Global Medical Record on data quality in the EPR.

For epidemiological studies, the preliminary findings tend to show that, for a ResoPrim-like network, it is too soon to attain such goals as studying the incidence and prevalence of relevant health problems, the general population or providing policy makers with relevant information to assess the health needs and to commission services (e.g. vaccination programs or alert systems).

Socio-economic studies on the use of health care resources by the GP, the employment and activity of the GP and equity in GP care are not feasible yet because of lacking information in the EPR.

In general, the participating GPs were satisfied with their participation and the feedback they received. The results have led to 18 recommendations, enabling other networks to progress.

DISCUSSION AND CONCLUSIONS
When interpreting the results, the particular Belgian context for primary care should be taken into account: there are many GPs’ software packages (+/- 20), patients may freely choose their GP and there are many home visits (+/- 40% of GPs’ contacts). Moreover, from a scientific point of view, our results are only valid for the (not representative) sample of GPs.

Yet, ResoPrim showed that an EPR based research network can be set up in primary care with a high level of privacy protection. Such network can be a useful tool to monitor some aspects of the quality of care but needs strict quality control and assessment procedures to monitor (and to improve) the quality of the data. Improved data quality is also required for epidemiological studies.

Even if the participating GPs seem to be satisfied with their participation, the involvement of GPs at a broader (national) level in this domain is still challenging.

More information can be found on the website of the ResoPrim project: www.iph.fgov.be/epidemiology/epien/index38.htm.

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YOU ARE IN GOOD HANDS: RESULTS OF THE THIRD NATIONAL HAND HYGIENE CAMPAIGN IN HOSPITALS

INTRODUCTION
The use of an alcoholic solution for hand hygiene is the most important measure to prevent the transfer of microorganisms between patients, health workers and the hospital surroundings. Unfortunately we see that compliance with hand hygiene regulations among health workers generally lacks due to several factors. The success of the first two campaigns together with the need to repeat this sort of campaign at regular intervals to reach a permanent change of behaviour, led to the decision to organise a hand hygiene campaign every two years (Epi-Scoop 2008, nr. 1). This is an initiative of the Federal Public Service Health, Food Safety and Environment that was realised with the support of the Belgian Antibiotic Policy Coordination Committee, the Federal Platform for Hospital Hygiene, the IPH, the Association Belge pour l’Hygiène Hospitalière, the Belgian Infection Control Society and the Nationale Vereniging van Katholieke Vlaamse Verpleegkundigen. The IPH developed the software for this campaign and performed the analysis of the data.

METHODS
The third national campaign (2008-2009) addressed both the health workers and the hospitalised patients. The campaign contained two large parts: the actual sensitisation of the health workers and patients by the campaign material and the assessment of the impact of the campaign by measuring before and after the campaign (i) the hand hygiene compliance of the health workers by direct observation; (ii) the amount of hand alcohol used and (iii) the compliance with the ground rules for a good hand hygiene (optional).

The sensitisation part existed of a vast range of campaign material inspired by several sources: posters highlighting certain hand hygiene indications, the right use of hand alcohol and gloves, standardised training sessions for health workers, a web-based quiz, an information leaflet with gadget for the patient and an information leaflet for the doctors.

Measuring the degree of hand hygiene compliance (= percentage of observed hand hygiene with soap and/or hand alcohol divided by the number of observed hand hygiene opportunities) was carried out by the staff of the hospital hygiene team. The measurements were filled in on a standardised observation grid with a minimum of 150 observations per unit and including at least the intensive care unit. For each hand hygiene opportunity the observer took down whether hand hygiene measures were taken: decontamination with alcohol, washing with water with or without soap, or no action. The data were then entered into NSI-Hwin 4.08 (software on the basis of MS Access) and sent back for analysis and feedback to the IPH. Feedback of the results to the care providers was considered as a substantial part of sensitisation.

RESULTS
In total 166 institutions took part in the campaign (120 acute, 12 chronic and 34 psychiatric hospitals). The average hand hygiene compliance amounted to 59.7% (P10: 36.8; P50: 60.4; P90: 72.7) before the campaign. At national level, the hand hygiene compliance increased by on average 10.8% after sensitisation (p <0.001). Moreover we saw an improvement of compliance when comparing the results with the same phase of the first and second campaigns (Figure 1).

In the intensive care unit (n=127), the observed compliance before the campaign was higher in comparison with the other units (on average 62.7%) and it increased by 6.7% after campaign (p <0.001). The average compliance before campaign was systematically lower in psychiatric wards than in the acute hospitals (52.1% versus 59.1%), but at the same time this type of institution also produced the strongest increase (66.9% versus 69.4%). The average hand hygiene compliance was systematically lower before contact with the patient than after contact. After the campaign this difference continued to exist, although the compliance for all types of contact evenly rose by approximately 10 to 12%. Nurses scored the highest both before and after campaign and doctors score the lowest. However, we saw an improvement after campaign in every professional group of 10% on average. The results show that, proportionally, hand alcohol was used more after the campaign (median of respectively 78.2% to 84.3% (p<0.001)).

CONCLUSIONS
Le module web The campaign was successful, not only in terms of participation rate, but also in terms of results. To achieve a long-lasting result, it is important to repeat campaigns such as this one.


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