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# HPSC celebrates ten years of success



**The Health Protection Surveillance Centre was established ten years ago this November. HPSC Director, Dr Darina O'Flanagan recalls the last decade.**

It's hard to believe that ten years have passed since the Health Protection Surveillance Centre, or the National Disease Surveillance Centre as we used to be called, was set up in October 1998.

The Centre was established largely due to the vision of the then Chief Medical Officer of Health, Dr Jim Kiely and members of the Royal College of Physicians including members from the Faculty of Public Health Medicine and the Faculty of Pathology. They were fully supported by the then eight health board CEOs around the country. Before HPSC, infectious disease surveillance in Ireland was looked after by the Department of Health who had been monitoring a limited number of diseases since 1947.

NDSC was governed by a board before we joined the HSE in January 2005 and became HPSC. NDSC was served well by its two able and supportive board chairmen, initially Professor Dermot Hourihane and later Dr Elizabeth Keane.

We produced our first annual in 1999 with just ten staff most of whom were recruited that year to allow the agency to function properly. Ten years on half of those original workers are still working at HPSC. That initial report covered just four disease areas namely, tuberculosis, meningococcal disease, *E. coli* O157 and antimicrobial resistance. A decade later, the Centre is responsible for the surveillance of 68 communicable diseases, as well as outbreak surveillance.

From the very start, the work of the new surveillance centre was made possible by the efforts of public health physicians working in departments of public health throughout the country and by clinical microbiologists working in laboratories nationwide. To meet the challenges of developing and strengthening surveillance, surveillance scientists were appointed at our centre, in the Departments of Public Health and in laboratories. These scientists have contributed significantly to the progress we have made over the past ten years.

Right from the very beginning, participation in the European Antimicrobial Resistance Surveillance System (EARSS) was a priority and we were part of the project as soon as the programme got up and running in January 1999. Initially there were just 12 Irish laboratories taking part. We currently have 44 laboratories contributing to EARSS, providing some of the most comprehensive data on anti microbial resistance available anywhere in the world.

One of the first and most important tasks was to set up a multi-disciplinary scientific advisory committee to provide expert advice. Initially this was under the chairmanship of Dr Ed Smyth and more recently under the chair of Professor Stephen Flint. This committee has played a vital role over the years and has had a major input into the improvement of disease surveillance and management in Ireland. It has been responsible for publishing expert advice in areas such as legionnaires' disease, sexually transmitted infections, norovirus, cryptosporidiosis, invasive group A streptococcus and more recently *Clostridium difficile* infection. The voluntary contribution of members from fields in environmental health, dental health, public health, veterinary medicine, occupational health, general practice, laboratory medical science, infection control, food safety, paediatrics and microbiology, has made a massive contribution to public health in Ireland. Their expertise and differing perspectives have been essential in producing sound advice that meets the needs of all professional groups.

# HIV and AIDS in Ireland, 2007

## Background

During 2007, an estimated 2.5 million people worldwide became newly infected with HIV and an estimated 2.1 million lost their lives to AIDS.<sup>1</sup> HIV infection remains a disease of major public health importance in the WHO European Region. Timely and complete HIV surveillance data are essential to accurately monitor trends in the epidemic. Data on HIV and AIDS in Ireland are obtained from the national HIV case based reporting system, a voluntary anonymised surveillance system.

The data presented in this report are based on newly confirmed cases of HIV reported in a given time period. The number of newly confirmed cases reported is dependent on patterns of testing and reporting.

## HIV infections, to end of 2007

By the end of 2007, 4,781 diagnoses of HIV were reported in Ireland since surveillance began. The number of newly diagnosed HIV infections increased considerably from 120 cases in 1998 to a peak of 399 cases in 2003 followed by a decrease to 337 in 2006. The number of newly diagnosed HIV infections has increased to 362 in 2007, representing a 7.4% increase from 2006. As the presence of a sexually transmitted infection (STI) facilitates the transmission and acquisition of HIV, the ongoing increase in annual notifications of STIs in Ireland (from 2,588 in 1994 to 9,892 in 2007) is also of concern.<sup>2, 3</sup>

It should be noted that no reporting forms were received from clinicians for 99 (27.5%) of the 362 newly diagnosed cases in 2007, making analysis of the data and interpretation of trends difficult. This is almost twice the proportion of cases for which forms were not received at the time of publication of the 2006 annual report. The magnitude of the problem of missing data, and the fact that this is increasing, once again highlights the need for a statutory notification system for HIV infection in Ireland.

Figure 1 shows newly diagnosed HIV cases from 1994 to 2007

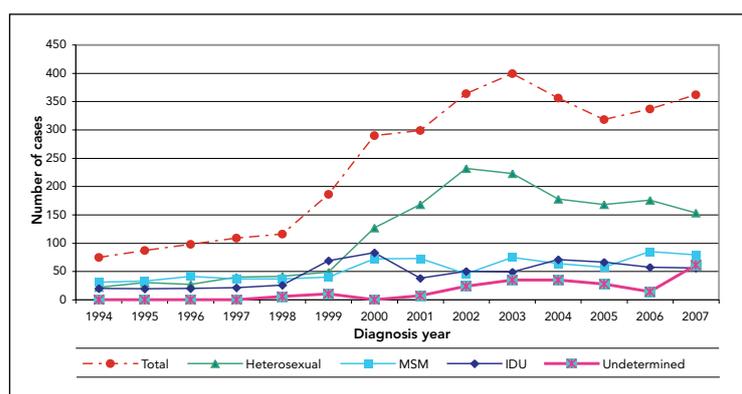


Figure 1: Annual number of HIV infections, 1994 to 2007

by probable route of transmission for the three most frequent routes, namely heterosexual contact, men who have sex with men (MSM) and injecting drug users (IDUs). During 2007, information on probable route of transmission was unavailable for 72 (19.9%) cases, which is considerably higher than previous years.

## Heterosexual contact

Heterosexually acquired cases have decreased from a peak of 232 in 2002 to 149 in 2007. This is largely due to a decrease in heterosexually acquired cases among people born in sub-Saharan Africa (SSA) from 183 cases in 2003 to 89 in 2007. This may reflect the decrease in the number of asylum seeker applications between 2002 and 2007 (from 11,634 to 3,985), with fewer cases being detected through the asylum seeker screening programme. The number of new diagnoses among heterosexuals born in Ireland remained steady between 2003 and 2007 with an average of 32 cases per year. Currently, heterosexual contact is the most frequent mode of transmission in most countries in western Europe.<sup>4</sup>

Of the 149 heterosexual cases in 2007, there were 87 females (58.4%), 52 males (34.9%) and 10 cases where sex was not reported (6.7%). The mean age was 31.7 years. Fourteen (9.6%) of the 149 heterosexual cases diagnosed in 2007 were diagnosed late i.e. diagnosed with AIDS at the time of HIV diagnosis. Of these 14 late diagnoses in heterosexuals, eight were born in SSA, five were born in Ireland and one was born in the US. Diagnosing HIV as soon as possible is vital for both the individual and the community and provides an opportunity for early intervention and treatment.

## Men who have sex with men

There were 75 new diagnoses among MSM during 2007, a decrease from the number diagnosed in 2006 (85). MSM continue to be a population at high risk for HIV infection with the number of HIV cases among MSM almost doubling between 1998 and 2006 in western European countries which report transmission group to EuroHIV.<sup>4</sup> The mean age at HIV diagnosis in MSM in 2007 was 35.5 years. Of the 75 cases diagnosed in 2007, 42 (56.0%) were born in Ireland and 10 (13.3%) in western Europe. Four (5.3%) of the 75 cases in MSM were diagnosed late.

## Injecting drug use

There were 55 new diagnoses among IDUs during 2007. There was a considerable jump in the number of cases in IDUs between 1998 and 1999 (from 26 to 69) with an average number of 60 cases per year since then. Of the 55 cases, 37 (67.3%) were

born in Ireland, 36 (65.5%) were male and the mean age at HIV diagnosis was 30.7 years. Eight (14.5%) of the 55 cases in IDUs were diagnosed late.

### *Mother to child transmission*

HIV infection was newly diagnosed in eight children in 2007. The probable route of transmission for six cases was known to be mother to child transmission (MCT). Of the six MCT cases, four of the children were born in sub-Saharan Africa, one was born in the UK and one was born in Ireland. All six of the mothers were born in countries with generalised HIV epidemics, with three of the mothers diagnosed after the birth of the children. In addition, there were 117 babies born to a HIV infected mother in Ireland during 2007: 91 are not infected, 25 remain of indeterminate status (i.e. do not meet the criteria for HIV infection and are <18 months at time of test) and one was infected. The mother of the infected baby was from sub-Saharan Africa. This mother tested negative during the pregnancy but later tested positive post-natally, prompting testing of the baby.

### **AIDS cases and deaths, to end of 2007**

By the end of 2007, 957 cases of AIDS were reported in Ireland since surveillance began. Of these, 405 are reported to have died. A total of 461 deaths have been reported in HIV infected individuals in Ireland since surveillance began. Information on cause of death has been supplied since the introduction of HIV case based reporting in 2001. Of the 37 deaths that occurred

among AIDS cases between 2002 and 2007, the cause of death was reported as AIDS in 31 cases (83.8%), HIV/AIDS related in three cases (8.1%), non-AIDS in two cases (5.4%) and unknown in one case (2.7%). Five deaths in AIDS cases were reported during 2007.

More detailed HIV and AIDS reports are available on the HPSC website at <http://www.ndsc.ie/A-Z/HepatitisHIVAIDSandSTIs/HIVandAIDS/Publications/>.

**Sarah Jackson and Dr. Lelia Thornton, HPSC**

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## **World AIDS Day, December 1st 2008**

**Today 1st December 2008 marks the 20th anniversary of World AIDS Day. This year's theme "Lead – Empower – Deliver", builds on last year's "Take the Lead".**

While new HIV infections globally have declined from 3 million in 2001 to 2.7 million in 2007 the AIDS epidemic still affects every part of the world. Although the number of new infections has fallen in several countries, infections continue to rise in many countries including China, Indonesia, the Russian Federation and Ukraine. It is estimated that 33 million people are living with HIV worldwide with nearly 7,500 new infections each day.

Further information on the global HIV and AIDS pandemic can be found on the UNAIDS website [www.unaids.org](http://www.unaids.org).

For more on the World AIDS campaign for 2005-2010 – Stop AIDS. Keep the Promise and World AIDS Day 2008 visit [www.worldaidscampaign.info](http://www.worldaidscampaign.info).

The latest report on HIV and AIDS in Ireland – for the first six months of 2008 - is available at [www.ndsc.ie/hpsc/A-Z/HepatitisHIVAIDSandSTIs/HIVandAIDS/SurveillanceReports/2008-Latestfigures/](http://www.ndsc.ie/hpsc/A-Z/HepatitisHIVAIDSandSTIs/HIVandAIDS/SurveillanceReports/2008-Latestfigures/)

## HPSC celebrates ten years of success (cont.)



Darina with members of the HPSC team at our Gardiner Street offices

Good timely information is vital to make sure that the right actions are taken to improve the everyday health of people living in Ireland. One of HPSC's biggest successes has been the design, implementation and management of Computerised Infectious Disease Reporting which gives real time information on disease and is a vast improvement on the old paper based systems. Again, the success of the system is based on collaboration between those working in microbiology departments and public health departments. Meaningful data is needed for prompt action and the work of surveillance scientists in laboratories and departments of public health around the country means that action can be taken quickly to control outbreaks of infectious disease. I'm proud to say that internationally we are well ahead of the pack in terms of disease reporting and deputations from around the world have come to Ireland to study our computerised system.

One of the biggest challenges that public health faced in the last decade was hyper-endemic meningococcal disease which peaked in the late 1990s and early years of new century. We saw around 500 cases of meningococcal meningitis in 1999 but this has dropped to less than 200 in 2007. This was mainly due to the introduction of the MenC vaccination programme, which was based on HPSC epidemiological data and the work of the Meningococcal Reference Laboratory who worked with public health medicine specialists throughout the country to gather enhanced information on all meningococcal cases. Almost nine out of ten cases we see today are due to serogroup B disease for which there is currently no vaccine. However trials of a new vaccine are currently taking place and hopefully they will be successful and provide even further protection.

Over the last ten years I have lost count of the number of people we have trained in epidemiology through the European Programme for Intervention Epidemiology Training (EPIET), the Faculty of Public Health Medicine Training programme and our

week long intervention epidemiology courses run in conjunction with Epiconcept. Our building has turned into something of a national and international hub and all of my colleagues in HPSC take great pride in knowing that we have contributed to training so many people who are making a real difference in their areas of expertise. In HPSC, EPIET fellows from countries like Lithuania, Italy, Greece and France have worked alongside the Irish registrars and HPSC staff, developing international friendships and networks. The saddest moment in my ten years was on hearing of the death of one of the EPIET fellows Dr Max Di Renzi who was tragically killed in a road accident in 2006. He was a bright, humourous guy with a great future ahead of him and a terrible loss to his family in Italy and to all his many friends at HPSC.

HPSC has forged close links with sister organisations in Europe and throughout the world and maintains close contact with the new European Centre for Disease Prevention and Control which was founded in 2005, and also with WHO Europe. It is impossible to overstate the importance of international co-operation in the fight against infectious diseases. While it may sound a cliché, diseases don't recognise international borders and it is essential we work together to protect the population as a whole.

The cornerstone of our success over the last ten years has been our staff, who have worked tirelessly and with great flexibility in what is a challenging but hopefully rewarding workplace. There is always a great buzz and sense of camaraderie about the place and our staff have created an open environment where you would never be stuck for advice, opinion or a helping hand.

HPSC also plays a crucial role in getting information about communicable disease to the public. We have been involved in numerous public information campaigns from childhood immunisations to dealing with the threats posed by the likes of bird flu and SARS. Our website – [www.hpsc.ie](http://www.hpsc.ie) – continues to be one of our most important communications tools. It contains a wide range of information, including all reports published by the centre, weekly, quarterly and annual communicable disease statistics, disease specific factsheets, press releases and other information.

New challenges continue to emerge. For example, we are working with our colleagues in population health at improving our surveillance of hospital acquired infection. We are also collaborating with other departments in the HSE such as the emergency preparedness team as it is essential that we work together to prepare for new emerging diseases and the possibility of future pandemics such as pandemic influenza.

To all of those who have worked with us – both inside and outside of HPSC over the last decade – thank you. Here's to the next ten years.