

Report of the Gonorrhoea Control Group for HSE East and HSE South East

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Report of the Gonorrhoea Control Group for HSE-East and HSE-SouthEast



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December 2015

About this report

This is a report from the multidisciplinary Gonorrhoea Control Group which was convened in Dublin in December 2012 and concluded in June 2014. Included are details on the investigation into the increase in gonorrhoea notifications and the control measures which the Gonorrhoea Control Group successfully implemented. The report concludes with recommendations based on the lessons identified by group members in the course of this work.

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1. EXECUTIVE SUMMARY

Gonorrhoea is a curable bacterial sexually transmitted infection which can lead to significant morbidity if left untreated. In December 2012 a multidisciplinary Gonorrhoea Control Group was convened in Dublin in response to concerns about a significant increase in the numbers of notifications of gonorrhoea. This report describes the work of the Group. Initially the Group focussed on the population in HSE-East (Dublin, Wicklow and Kildare) and was later expanded to include HSE-SouthEast (Carlow, Kilkenny, South Tipperary, Waterford and Wexford). The Group was active for over a year and a half and was concluded in June 2014, once a halt in the increase of gonorrhoea notifications was achieved.

Internationally and locally gonorrhoea has become a particular public health concern due to increases in incidence and concerns regarding the development of further antimicrobial resistance. In HSE-East there was an exponential increase in notified cases since 2010, from 379 notifications that year to 811 in 2012, an increase of 114%. Increases in notified cases in HSE-SouthEast in 2013 lead to the inclusion of that area in the Group. Clinical concern was also expressed about increases in cases of pharyngeal-only infection, particularly in men who have sex with men (MSM). In addition, it was known that increased ascertainment of cases was likely, following the introduction of the highly sensitive nucleic acid amplification testing (NAAT) in the period 2009/2010.

As the routine surveillance data did not provide sufficient detail on the epidemiology of gonorrhoea in the local population, the Group decided it would be necessary to carry out further investigation. This was carried out through retrospective enhanced surveillance on the laboratory-confirmed gonorrhoea cases that had been notified on the Computerised Infectious Disease Reporting (CIDR) system in HSE-E and HSE-SE over the period 1st January 2013 to 31st March 2013 (Q1-2013). Data was collected on 223 cases (96% of all), the majority of whom were notified in HSE-E (88%). Analysis identified two risk groups; MSM (56%) and young heterosexuals (males 28%, females 16%).

The detailed information included the reasons for testing, anatomical site of infection, mode of acquisition, country of birth etc. This information was used in developing and implementing the various control measures which included: development of new health promotion materials targeted at young heterosexuals with messages delivered via a social media campaign; support for continued funding of the health promotion initiatives already established for MSM; alerts to the health system about the importance of early diagnosis and appropriate management of patients with gonorrhoea infection and an assessment of the additional clinical and laboratory services required to meet any increased demands for services following the health promotion campaign.

Continued surveillance of gonorrhoea demonstrated a decline in the rise in gonorrhoea notifications, with a levelling off during the first half of 2014. In June 2014, the Group was concluded. Since then, many members have been involved in a number of different activities for sexual health improvement, which include developments in health promotion and clinical practice as well as preparedness for further STI control work.

December 2015

2. Membership of Gonorrhoea Control Group

Dr Fionnuala Cooney (Chair)

Specialist in Public Health Medicine,
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Ms Fidelma Brown (Oct 2013 – Jan 2014)

HSE Head of Public Communications,
Dr Steevens' Hospital, Dublin

Dr Susan Clarke

Consultant in Infectious Diseases,
St James's Hospital, Dublin and
HSE Gay Men's Health Service

Dr Grainne Courtney

Associate Specialist in Genito-Urinary
Medicine, St James's Hospital, Dublin

Dr Brendan Crowley

Consultant Microbiologist,
St James's Hospital, Dublin

Dr Miriam Daly (from May 2013)

General Practitioner and
ICGP Director of Women's Health

Ms Helen Deely (from Feb. 2014)

Head of HSE Crisis Pregnancy Programme

Ms Susan Donlon (from July 2013)

Co-ordinator Education and Prevention,
HIV Ireland

Dr Phil Downes

Surveillance Scientist,
Department of Public Health, HSE-E

Dr Sarah Doyle

Specialist in Public Health Medicine,
Department of Public Health, HSE-SE

Dr Nazih Eldin (until Feb. 2014)

Director of Health Promotion, HSE

Dr Margaret A Fitzgerald (Medical secretary up to Oct 2013)

EPIET Fellow/Senior Surveillance Scientist,
HSE-Health Protection Surveillance Centre

Dr Margaret M Fitzgerald

Director of Public Health, Department of
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Dr Gabriel Fitzpatrick (Medical secretary from Oct – Dec 2013)

Specialist Registrar in Public Health Medicine,
Department of Public Health, HSE-East

Ms Michelle Gaffney (until August 2013)

Laboratory Scientist
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Clinical Nurse Specialist (Sexual Health),
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Specialist in Public Health Medicine,
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Ms LizAnn McKeivitt (from Sept 2013)

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Medicine, Department of Public Health,
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Dr Sara Woods

Clinical Registrar, National Virus Reference
Laboratory, University College Dublin

3. Timeline

| | |
|-----------------------|---|
| October 2012 | Members of the STI-subgroup of Public Health Communicable Disease Group sent an alert to GPs nationally with update on latest recommendations on management of gonorrhoea. This action was in response to the report from HSE-West of a detection of third generation cephalosporin resistance in a gonorrhoea isolate. |
| November 2012 | Director of Public Health HSE-East informed by Infectious Disease Consultant about an increase in cases of gonorrhoea being diagnosed at two STI clinics in Dublin. |
| December 2012 | Department of Public Health HSE-East convene a scoping meeting in St. James's Hospital with personnel from GUIDE (genito-urinary and infectious disease clinic at St James' Hospital, Dublin), Gay Men's Health Service (GMHS) and HPSC. At meeting it is agreed to establish a multidisciplinary Gonorrhoea Control Group. |
| February 2013 | First meeting of Gonorrhoea Control Group (1st Feb 2013) Publication of report on surveillance on gonorrhoea in HSE-East in Epi-Insight. ¹ |
| April 2013 | Work of Group expanded to include HSE South-East. EPIS alert issued re pharyngeal gonorrhoea. Pilot of newly devised Gonorrhoea Enhanced Surveillance Form. Presentation on work of Group at the Society or the Study of Sexually Transmitted Diseases in Ireland (SSSTDI) national meeting. |
| May 2013 | Poster presentation on work of Group at Infectious Diseases Society of Ireland (IDSI). |
| June 2013 | Results of investigation reveals two main risk groups: MSM and young heterosexuals. Control actions planned and two sub-groups established: <ul style="list-style-type: none">• Information sub-group and• Resources for services sub-group Oral presentation on work of Group at Gay Health Forum. |
| July 2013 | First briefing report on work of Group. |
| September 2013 | First meeting of Resources for services sub-group. Publication of results of enhanced surveillance on gonorrhoea in HSE East and South East in Epi-Insight. ² |
| October 2013 | Second briefing report outlining implications for services arising from planned information campaign. |

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| November 2013 | Poster presentation at European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE). Sexual Health Awareness Week (SHAW) Press release and media interest. |
| December 2013 | Information campaign for young heterosexuals commences and continues to 14 th Feb 2014. ICGP elearning modules on STIs in Primary Care launched. Updating of HSE websites with information on gonorrhoea. Oral presentation at Faculty of Public Health Medicine Winter Scientific Meeting. |
| February 2014 | Conclusion of information campaign for young heterosexuals. |
| March 2014 | Report to Group on information campaign for young heterosexuals. |
| April 2014 | Presentation at the Regional Spring meeting of the Society for Study of Sexually Transmitted Diseases in Ireland (SSSTDI). |
| May 2014 | Presentation at the Faculty of Public Health Summer Scientific Meeting, RCPI, Dublin. Review of surveillance data indicated the notification rate had levelled off. |
| June 2014 | Report to Group on resources for services subgroup and conclusion of sub-group. Gonorrhoea Control Group concluded (12th June 2014) |
| August 2014 | Development of framework document to support writing of report. First draft of report reviewed. Work postponed for some months due to other Health Protection priorities including work related to the Ebola outbreak in Africa. |
| November 2014 | Poster presentation at European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE). |
| February 2015 | Meeting to review second draft of report. |
| December 2015 | Report completed and signed off by Gonorrhoea Control Group on 16 th December 2015. |

4. Introduction

The Gonorrhoea Control Group for HSE-East and HSE-SouthEast was formed in December 2012 and concluded in June 2014. The Group was convened in response to a significant rise in notifications of gonorrhoea cases. The Group investigated the increase in gonorrhoea notifications, implemented a number of control measures, including an information campaign via social media, and closely monitored the surveillance data on gonorrhoea notifications on a monthly basis. When the rise in gonorrhoea notifications was halted, the Group was concluded having been in existence over a 19 month period.

In this report, the work of the Group is described in the following sections: background; the recognition of the upsurge in gonorrhoea notifications; the formation of the Gonorrhoea Control Group; the investigations carried out; the development and implementation of control actions, the impact of these actions, the conclusion of the Group. Also included is a summary of other aspects of the Group's work on gonorrhoea control. This report ends with recommendations based on the various lessons identified through the work of the Group.

5. Background

Gonorrhoea is a curable sexually transmitted infection caused by the bacterium *Neisseria gonorrhoeae*. It is the second most prevalent bacterial STI worldwide. The disease differs in males and females in course, severity and ease of recognition.³ The incubation period is short, usually one to five days (range one to ten days). Gonorrhoea infects columnar epithelial cells of the urethra, endocervix, pharynx, rectum and conjunctiva and transmission is by inoculation of infected secretions from one mucous membrane to another. Many cases are asymptomatic.

The clinical features of gonorrhoea infection relate to the site of infection:

- Urethral infection in men causes mucopurulent urethral discharge with or without dysuria. Less than 10% of these infections are asymptomatic. Acute epididymitis is the most common local complication in men but occurs rarely
- Endocervical infection in women can cause mucopurulent discharge, lower abdominal pain and uncommonly causes abnormal vaginal bleeding. Up to 50% of endocervical infections are asymptomatic. Pelvic inflammatory disease in women can be symptomatic or asymptomatic. Long-term sequelae include infertility and chronic pelvic pain
- Rectal infection is usually asymptomatic but can cause anal discharge/discomfort
- Pharyngeal infection is asymptomatic in over 90% of cases
- Conjunctival infection in adults is usually due to auto-inoculation from genital infection. Neonatal conjunctivitis (ophthalmia neonatorum) occurs acutely a few days following vaginal delivery, arising from the neonate's contact with infected secretions while passing through the birth canal
- Disseminated gonococcal infection occurs in less than 1% of infections and can lead to septic arthritis, dermatitis, endocarditis or meningitis.

5.1 Diagnosis of gonorrhoea

- Conventional microscopy and culture for *N. gonorrhoea* has now been replaced by nucleic acid amplification testing (NAAT) in many centres
- Gram stain microscopy can be used to identify gonococci in appropriate clinical specimens. In men with symptomatic urethritis, microscopy is 95% sensitive and is highly specific for gonorrhoea at this site
- Culture remains essential for determination of antimicrobial susceptibility and surveillance and for the detection of emerging resistance
- Convenience of NAAT specimen transport and storage are important considerations. NAATs are highly sensitive (over 96%). Equal sensitivity is demonstrated in urine and urethral specimens in men and in vaginal and endocervical swabs in women. Testing of urine in women is significantly less sensitive and urine is not an optimal specimen in women
- NAATs are significantly more sensitive than culture for detection of pharyngeal and rectal infection. Commercially available NAATs are not licensed for testing of specimens from these sites and assays differ significantly in specificity, particularly in the pharynx. Reactive specimens are confirmed by supplementary testing using a different nucleic acid target.⁴

NAATs are a relatively new diagnostic modality and are significantly more sensitive than the previous mainstay of diagnoses, which was culture. As a result, more cases are ascertained through the use of NAATs. Access to NAAT is relatively recent, with the test becoming available at NVRL in April/May 2008, University Hospital Waterford in July 2009 and at St James' Hospital Laboratory in September 2010, which serves GUIDE and GMHS.

5.2 Notification and surveillance

Gonorrhoea is a notifiable infection and all medical practitioners, including clinical directors of diagnostic laboratories, are legally required to notify cases to the Medical Officer of Health/ Director of Public Health. The notified information is used to monitor epidemiological patterns and to identify upsurges and outbreaks of infection.

Although notifiable, the routine surveillance data on gonorrhoea were limited, with only basic demographic data being routinely collected on a quarterly basis. With the exception of the SouthEast, for the period 1995 – 2012, only aggregate data by gender and age-groups were available. In the SouthEast case-based data on gonorrhoea notifications were notified through Computerised Infectious Disease Reporting (CIDR), the national database for the notifiable infectious diseases (initially as a pilot) from week 15, 2008 to date. From January 2013, all laboratories commenced reporting case-based data on gonorrhoea notifications via CIDR.

5.3 Treatment of gonorrhoea

- First-line treatment is:
 - o ceftriaxone 500 mg intramuscularly immediately plus azithromycin 1 g orally in accordance with the BASHH guidelines,⁵ or
 - o ceftriaxone 500 mg intramuscularly plus azithromycin 2g orally, in accordance with IUSTI guidelines.⁶

Test of cure is recommended for all cases. ⁵⁻⁷

5.4 Public health importance of gonorrhoea

The observed upsurge in gonorrhoea notifications was a cause of public health concern because:

- untreated or inadequately treated gonorrhoea may lead to severe secondary sequelae
- infection with gonorrhoea may facilitate the transmission/acquisition of HIV
- many cases are known to be asymptomatic – approx 50% of women and 10% of men with urogenital gonorrhoea have no symptoms, most individuals with infection of rectum or pharynx are asymptomatic
- antimicrobial resistance is a major problem with gonorrhoea - resistance is emerging to the extended spectrum cephalosporins and it is possible that multidrug resistant gonorrhoea may become untreatable in the near future ^{8,9}
- the increase in notifications indicates a significant level of high risk sexual activity

6. Identification of the upsurge, formation of the group and incident co-ordination

6.1 Identification of the upsurge in gonorrhoea cases and notifications

The Director of Public Health in HSE-East was contacted by an Infectious Disease Consultant who was concerned about an increase in the numbers of cases of gonorrhoea being diagnosed in Dublin at the STI clinics at GMHS and GUIDE. At this time there was growing concern within Public Health about a steady increasing trend in the numbers of gonorrhoea cases being notified. Over a ten year period there was an almost eight fold increase in the number of gonorrhoea notifications in HSE-East (Table 1). Cases in males were approximately four times more common than in females, but the percentage year on year increases in recent years were similar among men and women.

Also of concern was a recent report of a detection of *N. gonorrhoea* antimicrobial resistance in HSE West.¹⁰ By November 2012, all Departments of Public Health sent an alert to the GPs in their areas about the importance of appropriate management of gonorrhoea, including details on the currently recommended first choice antibiotic treatment (Appendix A).

Table 1: Number of gonorrhoea notifications received in the HSE-East (Dublin, Wicklow and Kildare) 2003-2012

| Year | Female | Male | Unknown | Grand Total |
|--------------|------------|-------------|-----------|-------------|
| 2012 | 153 | 650 | 8 | 811 |
| 2011 | 106 | 463 | 22 | 591 |
| 2010 | 65 | 308 | 6 | 379 |
| 2009 | 37 | 195 | 3 | 235 |
| 2008 | 47 | 252 | 6 | 305 |
| 2007 | 31 | 236 | 6 | 273 |
| 2006 | 16 | 160 | 0 | 176 |
| 2005 | 14 | 228 | 4 | 246 |
| 2004 | 15 | 169 | 6 | 190 |
| 2003 | 25 | 79 | 2 | 106 |
| Total | 509 | 2740 | 63 | 3312 |

6.2 Formation of the multidisciplinary group

In December 2012, the Department of Public Health HSE-East convened a multidisciplinary group to examine the increase in gonorrhoea notifications and to implement any necessary control measures. The Group held its first meeting on 12th December 2012. Following a review of the available data from public health surveillance and from the clinics, it was agreed that there was a need for more information than was currently available, in order to understand the reasons for the recent increase and respond appropriately. Specifically, there was insufficient data available to inform the Group as to whether or not there was an outbreak of gonorrhoea. At the meeting it was agreed to form a Gonorrhoea Control Group to investigate the upsurge in gonorrhoea cases and to plan and implement any necessary control measures.

Using the experience from a syphilis outbreak in Dublin in 2000/2001, Public Health actively sought members to join from the relevant disciplines and services to form a specialised multidisciplinary group. This resulted in representation from STI specialists and GPs, as well as personnel from microbiology, health promotion, health management, Public Health Departments and the Health Protection Surveillance Centre (HPSC). Additional members from other disciplines and services joined at later dates, as described in the sections which follow (see Membership list on page 3). Initially the Group focused on the situation in HSE-East (Dublin, Wicklow and Kildare) and, based on surveillance data, was expanded in April 2013 to include HSE-SouthEast (Carlow, Kilkenny, South Tipperary, Waterford and Wexford).

6.3 Incident co-ordination

The Group met regularly, usually on a monthly basis. At each meeting there was review of the latest available surveillance and clinical information on gonorrhoea, discussion and agreement on actions. All members were emailed with agendas and minutes of meetings along with relevant surveillance reports, articles and updates. The Group placed considerable importance on maintaining good communication with the relevant stakeholders and regular updates and reports were circulated. In addition, Group members reported widely on the work through publications and presentations (see Section 9.3.2).

On the formation of the Group, both the Assistant National Director for Public Health and the Director of the HPSC were informed as were the Public Health Medicine Communicable Disease Group and the STI/HIV Special Interest Group. During the 19 months of the work of the group, all of the above were regularly provided with updates and briefings were also provided to the Department of Health and the Director of Health and Wellbeing.

Composition of the membership of the Group was regularly reviewed and new members were invited to join as the need arose. At an early stage it was agreed that involvement of a non-governmental organisation (NGO) would be beneficial to the work of the Group and a request was forwarded to the Gay Health Network following which a representative from HIV Ireland joined in July 2013. At a later stage a representative from HSE Communications joined to Group to support the work in relation to the information campaign.

There were contributions also from others to the Group's two sub-groups as listed in Appendix B.

7. Investigation

Preliminary investigations carried out by group

The first stage of the investigation involved a review of the information from the following sources:

1. Information on gonorrhoea from Public Health surveillance systems.
2. Information from clinicians and services.
3. Health promotion resources for STI prevention.

7.1 Information on gonorrhoea from Public Health surveillance systems

Data was provided to the group from (a) Dept of Public Health HSE-East, (b) Dept Public Health HSE-SouthEast and (c) HPSC.

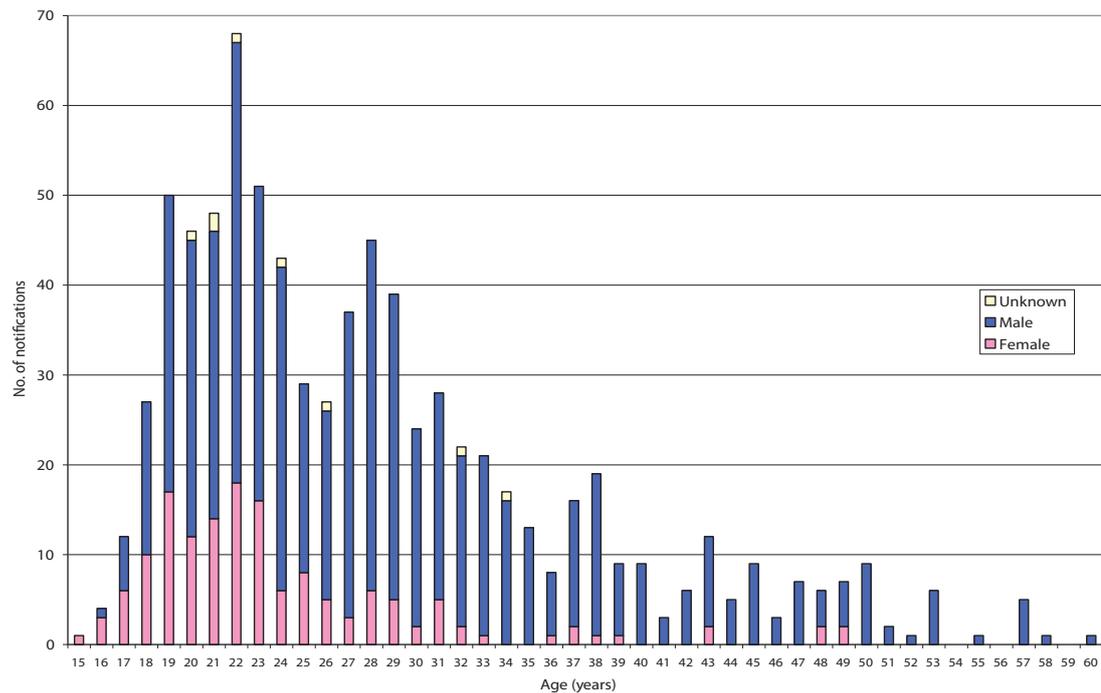
7.1.1 Dept of Public Health HSE-East

At the first meeting of the group in December 2012, the Dept of Public Health HSE-East provided a surveillance report describing notification trends in the East from 2003 to date. These trends, up to end 2012, were subsequently reported in Epi-Insight in February 2013.¹

In the East, over a ten year period there was an almost eight fold increase in the number of gonorrhoea notifications (Table 1). In 2012 the crude incidence rate (CIR) in the HSE-East was at its highest ever at 49.2 per 100,000, which was almost three times greater than the national average of 18 per 100,000. Notifications in men were about four times higher than in women. There were gender differences in the age-distribution of cases, with a wider age distribution among men and cases occurring at a younger age in women (Fig 1).

Overall, males accounted for 80% of cases. The rate of increase was of considerable concern, especially so in some groups, such as men who have sex with men (MSM). In 2012, for cases where source clinic information was provided, over half had attended the GMHS.

Figure 1: Age distribution of gonorrhoea notifications in HSE-East by sex in 2012

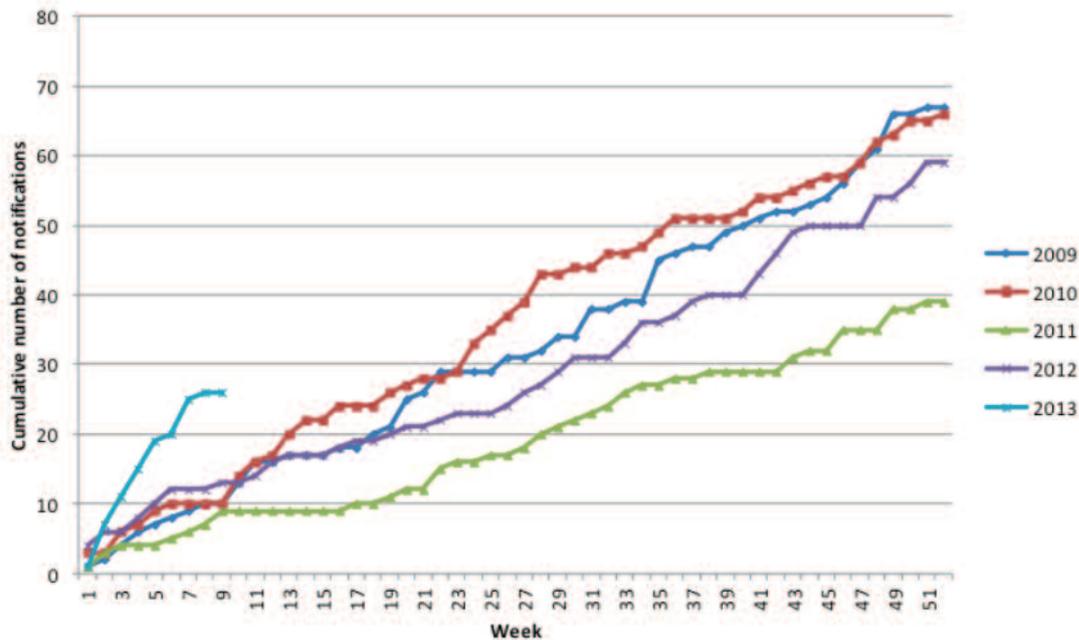


7.1.2 Dept of Public Health HSE-SouthEast

At this time, through the Public Health STI & HIV Special Interest Group (a subgroup of the national Public Health Medicine Communicable Disease Group), staff in the Department of Public Health in the SouthEast were aware of the investigation that had commenced in the East and were reviewing gonorrhoea surveillance data carefully.

HSE-SouthEast had been the location for a CIDR pilot for notification of STIs and so, unlike other areas, had case-based data on gonorrhoea notifications on CIDR since 2008 (week 15). It was noticed that, compared with the same period in previous years, notifications of gonorrhoea increased greatly in January and February 2013 (Fig 2). Double the number of cases were notified in Jan-Feb 2013 (n=26) compared with the same period in 2012 (n=13).

Figure 2: Cumulative number of gonorrhoea cases notified in HSE-SouthEast by week, 2009-Feb 2013

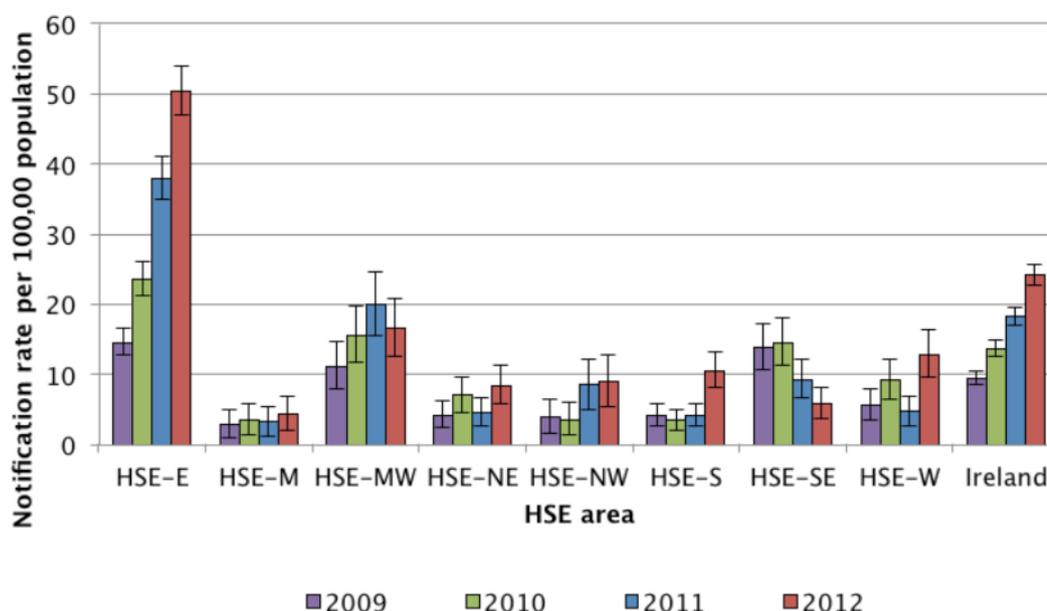


Sexual orientation was reported for 14 of the 26 notifications in HSE-SouthEast in January-February 2013, and of these, 12 (86%) were reported as heterosexual and two as homosexual. Eighteen cases were male and eight female. Of the cases reported as heterosexual, 11 of the 12 cases were 15-29 years of age. Therefore, the profile of cases in the SE was somewhat different from those in the East, being largely young heterosexuals and including more females. This young heterosexual group also emerged as a second important group, subsequently, in the East. As a consequence of the increase noted in the SouthEast it was agreed that a Specialist in Public Health Medicine from the SouthEast would join the Gonorrhoea Control Group and the work of the group would be expanded to include the SouthEast.

7.1.3 Health Protection Surveillance Centre (HPSC): National and international:

The HPSC reported on notification trends nationally and internationally. Between 2009 and 2012, there was a significant increase in notifications for gonorrhoea nationally (Fig 3). This increase was accounted for by increases in notification rates in HSE-East (HPSC, 2013). Increases in gonorrhoea were seen internationally also.¹¹ In the UK, between 2011 and 2012, new gonorrhoea diagnoses rose by 21% overall and by 37% in the MSM population.⁷

Figure 3: Gonorrhoea crude notification rates by HSE public health area and year with 95% confidence intervals, 2009-2012



7.2 Information from STI clinicians and services

Clinicians reported that they were seeing an increase in the number of confirmed gonorrhoea cases in the Dublin clinics. In addition to an increase in classic clinical presentations of urogenital gonorrhoea, there was also an increase in the number of positive tests on samples from the pharynx, particularly amongst MSM. It was identified that there was a need for a better understanding of clinical significance of a positive NAAT result on pharyngeal samples. There were also concerns expressed about current practice of epidemiological treatment of contacts of such cases, as recommended in the current BASHH guidelines.⁵ The recent availability of highly sensitive NAATs and the importance of antibiotic stewardship were important considerations for clinicians. This suggested that the increase in gonorrhoea cases reflected a real change and not likely to be due to increased testing or improved sensitivity of the tests.

Gay Men's Health Service, Dublin

At the GMHS there had been a 43% increase in diagnoses of gonorrhoea in 2012 (n=262) compared to 2011 (n=183). Of note, there had been a 23% decline in chlamydia diagnoses over the same period, from 207 to 159 cases.

Student Health Centre TCD, Dublin

In Sept 2010, the NAAT diagnostic test for gonorrhoea became available at student health services in TCD. Since that time, the numbers of students tested for gonorrhoea increased from an average of 300 per annum to about 700 per annum (16,646 registered students in 2012/13). Since the beginning of 2010 to February 2013, 32 cases of gonorrhoea have been diagnosed: 15 (47%) were in females and 17 (53%) in males (of whom, six were MSM). In females the commonest site was the pharynx and the majority were detected by NAAT. Heterosexual males have also been diagnosed with pharyngeal gonorrhoea.

7.3 Health Promotion resources for STI prevention.

In early 2013, the Group reviewed the available HSE Health Promotion sexual health resources, focussing on the availability of materials in relation to the prevention of STIs. It was agreed that the information needs of MSM were well catered for with good quality information available on the Man2Man website as well as high quality information posters and information leaflets in the form of small cards in the *Luv Bugs* series. At this time, additional materials on gonorrhoea infection were being developed.

However, the review of the available health promotion resources for young heterosexuals about STIs indicated a need for improvement in the information available for this population.

7.4 Conclusions following preliminary investigations

The Group concluded that there was firm evidence of an upsurge in gonorrhoea notifications. However, from the information available, it was not possible to establish whether or not the upsurge was due to an outbreak of gonorrhoea, or increased ascertainment of cases or a combination of both factors. The Group concluded that it was likely that the following factors were identified as contributing to the increase in notifications of gonorrhoea:

- More sensitive diagnostic tests i.e. NAATs which became available at the two busiest STI clinics in Dublin in September 2010
- Increased testing of extra-genital sites in men who have sex with men (MSM)
- Increase in routine STI screening
- On-going high-levels of unsafe sexual behaviour including unprotected sex, frequent changes of sexual partner, concurrent sexual partners.

As described in section 5.2, the routine surveillance data on gonorrhoea were limited. Crucially, the routine surveillance data (aside from that from the STI clinic in Waterford in SouthEast), did not provide information on the sexual orientation of cases or anatomical site of infection. Other information gaps included indication for test, risk behaviours, presence of co-infections etc. In order to obtain a better understanding of risk groups and risk behaviours of recent gonorrhoea cases in HSE-East and HSE-SouthEast, the Gonorrhoea Control Group undertook retrospective enhanced surveillance on notifications received over the most recent three month period, i.e. from January to March 2013 (Quarter 1 2013).

In relation to the health promotion materials for STI prevention, including gonorrhoea prevention, the Group concluded that:

- The health promotion resources for MSM were considered to be very good and the Group agreed that this important work should continue to be supported by HSE.
- Improvements were needed in the health promotion resources for heterosexuals on prevention of STIs. The Group agreed to the formation of a sub-group to develop resources and provide information on the prevention of gonorrhoea targeted at young heterosexuals.

8. Retrospective enhanced surveillance

Quarter 1 2103

The Group developed and piloted a new enhanced surveillance form (see Appendix C) which was used to collect data on cases notified in HSE-E and HSE-SE during Q1-2013 with the objectives of:

- describing the risk groups, risk behaviours and health seeking behaviours of cases.
- identifying the factors associated with gonorrhoea infection in the risk groups.
- identifying the factors associated with pharyngeal-only infection in men who have sex with men.

8.1 Summary of findings

Enhanced data was obtained on 223 (96%) of the cases notified in HSE-East and HSE-SouthEast during Q1-2013 (Table 2). The majority (88%) of cases were notified in HSE-East. Two risk groups were identified; MSM and young heterosexuals. Overall, 37% of cases were seen at the GMHS, 32% in other STI clinics and 26% in primary care. Males accounted for 84% of cases. Of all cases, 56% (N=125) were in MSM, 28% (N= 62) were male heterosexuals and 16% (N= 35) were female heterosexuals.

Table 2: Characteristics of gonorrhoea cases notified in the HSE-East and HSE-SouthEast Q1-2013 (n=223)

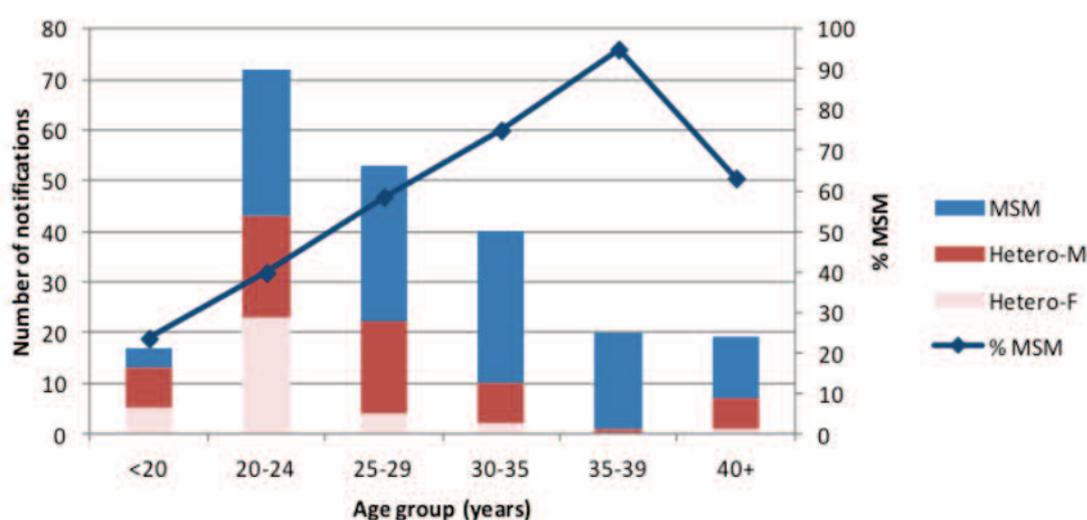
| Characteristic | Value* |
|----------------------------------|------------------------|
| Median age | 26 years (range:15-56) |
| Male female (M:F) ratio | 5.3:1 |
| MSM | 125 (56%) |
| Heterosexual males | 62 (28%) |
| Heterosexual females | 35 (16%) |
| Notified in East (Dublin region) | 197 (88%) |
| Born outside Ireland | 63 (28%) |
| Attended primary care | 59 (26%) |
| Diagnosed at STI screen | 63 (28%) |
| Asymptomatic | 111 (50%) |

*number and percentage unless otherwise stated

8.2 Comparing MSM and heterosexual (male and female) cases

A higher proportion of the cases notified in the HSE-East were in MSM compared with HSE-SouthEast (62% versus 12%, respectively; $p < 0.001$). Cases in heterosexuals were significantly younger than MSM, median age 23 years and 29 years, respectively ($p = 0.001$). Of cases in the <25 years age group, 62% were in heterosexuals (Figure 3). The proportion of cases in MSM increased with increasing age, peaking in the 35-39 years age group with 95% of the cases in MSM (Fig 4).

Figure 4: Number of gonorrhoea cases and proportion of MSM by transmission category and age group notified in HSE-East and HSE-SouthEast Q1-2013



Amongst MSM cases, 98% were diagnosed in HSE-East, 42% MSM were foreign born, 12% were diagnosed in primary care; the pharynx was the most common site of infection (61%) and the only site of infection in 35% of cases (Table 3).

Compared with heterosexuals, MSM were more likely to be HIV positive, have pharyngeal infection, have had an STI within the last 12 months, have had two or more sexual contacts in the previous three months, have been diagnosed during a routine STI screen, be resident/diagnosed in HSE-E and be born outside Ireland. MSM cases were less likely to be co-infected with *Chlamydia trachomatis*, be diagnosed in primary care and to be symptomatic (Table 3).

Table 3: Factors associated with gonorrhoea infection in MSM (n=125) and heterosexuals (n=97) in the East and South-East health regions of Ireland, Q1-2013

| | MSM % | Hetero % | Odds ratio | 95% CI | p value |
|-----------------------------------|----------|-------------|---------------|-----------|---------|
| Risk behaviour indicators: | | | | | |
| HIV positive | 13 | 0 | ∞ | 3.2 - ∞ | 0.001 |
| Pharyngeal infection | 61 | 18 | 7.3 | 3.7-15 | <0.001 |
| Pharyngeal-only infection | 35 | 7 | 6.9 | 2.9-19 | <0.001 |
| STI in last 12 months | 15 | 4 | 3.4 | 1.1-14 | 0.024 |
| Two or more contacts | 66 | 42 | 2.4 | 1.3-4.3 | 0.003 |
| Chlamydia co-infection | 20 | 32 | 0.53 | 0.28-1.0 | 0.042 |
| Health-seeking behaviours: | | | | | |
| Diagnosed at STI screen | 42 | 10 | 6.4 | 2.9-15 | <0.001 |
| Attended primary care | 12 | 44 | 0.17 | 0.08-0.35 | <0.001 |
| Other: | | | | | |
| Resident/diagnosed in HSE-E | 98 | 76 | 13 | 3.6-67 | <0.0001 |
| Born outside Ireland | 43 | 10 | 6.7 | 3.1-16 | <0.001 |
| Symptomatic | 35 | 67 | 0.24 | 0.13-0.44 | <0.001 |

8.3 Comparing heterosexual male and female cases

Forty three percent (n=97) of the gonorrhoea cases notified in Q1-2013 were in heterosexuals with over three quarters of these cases (n=74) notified in HSE-E. The male to female ratio was 1.8:1.0. Females were significantly younger than males; median age 22 and 25 years, respectively (p=0.022). Eighty percent (n=28) of females were <25 years of age compared with 45% (n=28) of males (p=0.002). One third of heterosexual cases (n=34) had a co-infection (39% in males and 29% in females, p=0.315) with the majority (n=31, 91%) having *Chlamydia trachomatis* infection. Almost half of the male cases and over one third of female cases were diagnosed in primary care.

Compared with female cases, heterosexual males were more likely to be symptomatic and have two or more contacts. Males were less likely than females to be <25 years of age, have been diagnosed as a result of a routine STI screen and to be diagnosed as a result of contact tracing (Table 4). There were no differences between heterosexual males and females among the other factors examined (e.g. HIV positive, STI diagnosis in the last 12 months, attending primary care, born outside Ireland).

Table 4: Factors associated with gonorrhoea infection in male heterosexuals (n=62) and female heterosexuals (n=35) in the East and South-East Health, Q1-2013

| | Male % | Female % | Odds ratio | 95% CI | p value |
|------------------------------|-----------|-------------|---------------|-----------|---------|
| Symptomatic | 90 | 31 | 20 | 6.1-73 | <0.001 |
| Two or more sexual contacts | 53 | 23 | 4.3 | 1.5-13 | 0.009 |
| <25 years of age | 45 | 80 | 0.21 | 0.07-0.6 | 0.001 |
| Diagnosed at STI screen | 2 | 26 | 0.05 | 0.00-0.38 | <0.001 |
| Diagnosed by contact tracing | 8 | 40 | 0.13 | 0.03-0.46 | <0.001 |

8.4 Laboratory findings

Nucleic acid amplification tests (NAATs) were used in the diagnosis of 96% (n=214) of all gonorrhoea cases. Almost half of these were also confirmed by culture (n=101; 47%). Amongst MSM, the pharynx was the most common site of infection (61%) being the only site of infection in 35% of cases, followed by the anorectum (42%) and the urogenital area (38%). The majority of heterosexuals were infected at just one site, with urogenital infection being the most common (90%). Overall, 85% MSM cases were tested in all three sites as is recommended, but this was achieved in only 27% of MSM cases attending primary care. This finding indicates that primary care clinicians require more specific guidance on three-site testing for MSM as well as having improved access to laboratory testing of extragenital sites.

A more detailed report on the enhanced surveillance findings is available on request from HPSC (Dr Derval Igoe, Margaret Fitzgerald).

8.5 Conclusions from the enhanced surveillance data Q1-2013

Analysis of the enhanced surveillance data revealed that there were two groups at most risk of gonorrhoea infection: MSM and young heterosexuals. Half of the cases were asymptomatic and a quarter of cases were diagnosed in primary care. MSM accounted for over half the cases and over 40% MSM cases were born outside Ireland. A high proportion of MSM cases had pharyngeal infection.

It was agreed that the routine surveillance needed to be improved in order to enable ongoing monitoring of the situation. Data completeness was needed on area of residence and mode of acquisition/sexual orientation for all notifications from April 2013 onwards. During 2013, a new CIDR report was developed to allow regular review of the trends in gonorrhoea notifications in HSE-East and other areas.

The Group considered whether an analytical study was warranted, but decided that it was not required as the information obtained from the descriptive analysis of the enhanced surveillance data was sufficient to guide the control measures.

9. Control measures

The control measures devised by the Group are described under the following three main headings, although in practice these activities were closely interrelated.

1. Provision of information tailored to the needs of young heterosexuals and MSM. This included information on safer sex (including safer oral sex), symptoms of STIs, access to STI screening and treatment.
 - o Information resources for young heterosexuals on gonorrhoea were to be developed as a matter of priority using youth-friendly media
 - o Existing information resources for MSMs were very good, and the Group agreed that these resources needed to be supported with ongoing funding from HSE. The “Luv Bugs” initiative was accelerated as a result of the increase in gonorrhoea cases, with the production of gonorrhoea materials being prioritised (Appendix G). In addition, increased emphasis was placed on gonorrhoea on the Man2Man website.
2. Assess the resources needed for the provision for additional screening and treatment capacity for STIs in Dublin, including both clinical and laboratory services, in anticipation of possible increased demand for STI services arising from the information campaign.
3. A communications plan to cover both external communications, such as with media, as well as internal communications with key stakeholders in HSE, Department of Health, professional organisations, NGOs etc.

Resources required to plan and implement the control measures

Funding was requested from the Assistant National Director Health Protection to support the range of control measures being planned. Funding was available only for the information campaign for young heterosexuals, which was supported by a grant from the HSE Health Promotion and Improvement Department.

9.1 Provision of information tailored to the needs of young heterosexuals and men who have sex with men.

9.1.1 Information campaign for young heterosexuals

A Working Group was established in September 2013 to develop and implement an information campaign targeting young male and female heterosexuals aged 17 to 25 years. A partnership working group was formed by HIV Ireland, the HSE Crisis Pregnancy Programme, HSE Health Promotion and Improvement Department, SpunOut.ie and the Union of Students in Ireland (see Appendix B for membership). Support funding of €6,050 was received from HSE Health Promotion and Improvement Department.

Key messages for the campaign were developed following the analysis of the data from the enhanced surveillance study. These included messages on the importance of having an STI screen following unprotected sex even if no symptoms are present, information on safer sex including safer oral sex, symptoms of STIs including information on asymptomatic infection, and information on testing and access to STI testing.

The information campaign for young heterosexuals commenced on 9th December 2013 and was promoted into the first two weeks of January 2014, with some additional promotion in February 2014. Primarily a social media campaign targeting young (heterosexual) men and women aged 25 years and younger, the main aim was to raise awareness about increases in gonorrhoea infections in Ireland and to promote information about gonorrhoea and its prevention.

Resources developed included five campaign creatives/visuals for promotion through social media channels, four posters, a pocket-size information booklet and new (and updated) website pages specific to the campaign on www.yoursexualhealth.ie. All campaign resources and key messages were tested with young people. Young people were consulted when choosing a hashtag for Twitter promotion and young people volunteered as models for the development of campaign creatives/visuals (see Appendix D)

Facebook and Twitter were the main channels of communication to reach the target audience, with some utilisation of popular Irish social networking sites also (Her.ie and Joe.ie).

The main results of the campaign included:

- The campaign hashtag, #OMGsti, trended on Twitter on the first day of promotion.
- Facebook posts reached over 170,000 people (duplicated across partner pages) with high engagement rates when benchmarked with recent studies.
- The campaign website showed a 59% increase in visits, and a 52% increase in unique visits, when compared to the previous year.
- The campaign attracted media interest and resulted in media reports covering the main issues.

(See Appendix E for summary of the social media campaign and Appendix F for copy of campaign press release. Copy of the Working Group's Report is available on request from Fionnuala Cooney, Chair of Gonorrhoea Control Group.)

9.1.2 Printed information posters and leaflets

The key messages for the campaign were also included in posters and leaflets on gonorrhoea, developed specifically for young people not engaged with social media. To support planning in relation to the distribution of printed information, particularly, a mapping exercise was carried out. Using census data, maps were prepared ranking electoral divisions according to the absolute numbers of young residents aged 15-29 years with inclusion of deprivation scores.

(Copy of maps available on request from Fionnuala Cooney, Chair of Gonorrhoea Control Group)

9.1.3 Information for MSM

The Gay Health Network's (GHN) "Luv Bugs" project targeting MSM had previously been developed and the production of gonorrhoea materials in the form of posters and business card-sized leaflets was prioritised in order to raise awareness about increasing gonorrhoea infections, testing and prevention (Appendix G). In addition, increased emphasis was placed on the information on gonorrhoea on the Man2Man website.

9.2 Assess the resources needed for the provision for additional screening and treatment capacity for STIs in Dublin.

A resources sub-group was formed to prepare a response plan for a possible increase in demand for STI clinical and laboratory services in HSE East. Membership included clinicians, personnel from laboratories involved in STI testing in Dublin and a Specialist in Public Health Medicine, who chaired the sub-group (see Appendix B for membership). The sub-group reviewed current STI services, including demand on the laboratory services. Data was provided on the numbers of new and return patients seen each month at the GUIDE, GMHS and the Mater Misericordiae University Hospital (MMUH) clinics in Dublin. Overall, approximately 800 new and 600 return patients were seen between all three clinics each month.

In addition, information was gathered on the numbers of tests for gonorrhoea and chlamydia that were carried out in the first quarter of 2012 to 2014 at St James' Hosp, National Virus Reference Laboratory (which provides a national service) and MMUH. The number of NAATs being carried out in the first quarter of each year at the three laboratories increased from 18,377 in 2012 to 19,411 in 2013 to 21,030 in 2014. In addition to NAATs, SJH and MMUH continued to carry out gonorrhoea culture and sensitivity tests. There were over 2,000 culture tests carried out during the first quarter in each year for 2012-2014.

It was concluded that that for an immediate, short term response to an increase in demand, the most feasible option would be to build up capacity within the walk-in specialist services. Regarding the laboratory services, it was acknowledged that any increase in testing for gonorrhoea would also increase demand for the other STI screening laboratory tests which includes tests for syphilis, HIV and hepatitis B. The sub-group members discussed these issues and prepared a report for the Gonorrhoea Control Group with the following main recommendations:

- Irrespective of changes in demand, the sub-group recommended provision of a partner notification service for cases of gonorrhoea diagnosed in primary care (the report included various proposals and estimated costs)
- In the event of an increased demand for clinical services, the following additional services are feasible in the short-term, conditional on the availability of the required funding:
 - o Evening clinic at GUIDE, St James' Hospital (Report included estimated costs)
 - o An additional clinic run for MSM by GMHS (Report included various proposals with estimated costs)
 - o In the event of an increased demand for laboratory services, there would be a need for additional funding for the laboratories. Due to the complexity of the current arrangement, the sub-group was not in a position to make specific recommendations as to where to allocate additional laboratory resources to cope with an increased demand for STI testing.

The sub-group agreed that support is needed for further development of sexual health services in primary care. It is expected that the implementation of the sexual health strategy, which is under development, will support service delivery in primary care. In the meantime, GPs could be supported through communication, education, improved access to laboratory services, improved procurement of appropriate antibiotics and access to a partner notification service.

9.3 A communications plan to cover both internal communications and external communications

The Group liaised early with the HSE Regional Communications Office who advised on internal HSE communications and communications external to HSE. A Communications Action plan was developed in which the following four audience groups were identified:

1. Young heterosexuals and MSM
2. Healthcare service personnel
3. Gonorrhoea Control Group and its two sub-groups
4. Senior Management in HSE and Department of Health

For each audience category, the key communication issues and messages were identified the activity and message clarified and the role and task of the communicators described. The main activities were as follows:

9.3.1. Communication plan for young heterosexuals and MSM

- Information campaign as described section 9.1.1.
- Updating of HSE website yoursexualhealth.ie and the HSE-supported website for MSM, Man2Man.ie
- Media release during the Royal College of Physicians in Ireland Sexual Health Awareness Week (SHAW) in November 2013. This resulted in wide media coverage including print, internet and radio broadcast (see Appendices H and I).

9.3.2 Communication plan for healthcare service personnel

- National email alert by HPSC on behalf of the Gonorrhoea Control Group to the health system which included STI clinicians, ID hospital consultants, Specialists in Public Health Medicine and Directors of medical laboratories
- The clinical leads in the STI clinics informed line manager/hospital manager about the upsurge and recommended that preparations be made for a possible increased demand on clinical and laboratory services
- Public health personnel regularly updated by Group members at national meetings
- Alert sent by HPSC via Epidemic Intelligence Information System for Sexually Transmitted Infections (EPIS STI), used for the rapid reporting and dissemination of unusual events related to STI transmission across Europe. (The alert enquired about the clinical and public health significance of positive *N. gonorrhoeae* NAATs on pharyngeal samples. Useful information was provided by the UK and the Netherlands but there was no identification of any work being undertaken in countries to investigate viability of pharyngeal *N. gonorrhoeae* detected via NAAT).

- Published articles in a range of different journals and magazines
 - o Articles on gonorrhoea in Epi-Insight; February 2013 and October 2013
 - o GP Forum magazine September 2013
 - o Letter in Sexually Transmitted Infections journal reporting that in Ireland the analysis of laboratory data showed that the increase in gonorrhoea was real and not an artefact due to an increase in testing.¹²

- Presentations on work of the Group at the following professional meetings:
 - o Society for the Study of Sexually Transmitted Diseases in Ireland (SSSTDI) Summer Meetings, April 2013 and April 2014
 - o Infectious Diseases Society of Ireland (IDSI), May 2013
 - o Gay Health Forum, June 2013
 - o European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE), November 2013
 - o RCPI Sexual Health Awareness Week (SHAW), November 2013
 - o RCPI Faculty of Public Health Medicine Winter Scientific meeting, December 2013 and Summer Scientific Meeting May 2014
 - o European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE), November 2014

9.3.3 Communication plan for the Gonorrhoea Control Group and its two sub-groups

As described in section 6.3, the Gonorrhoea Control Group held regular scheduled meetings. Prior to meetings, updated surveillance reports on gonorrhoea notifications were circulated, along with other relevant reports and articles. All Gonorrhoea Control Group meetings were minuted and copies circulated to all invited to the meeting. The meetings of the two sub-groups were similarly managed and their reports submitted to Gonorrhoea Control Group.

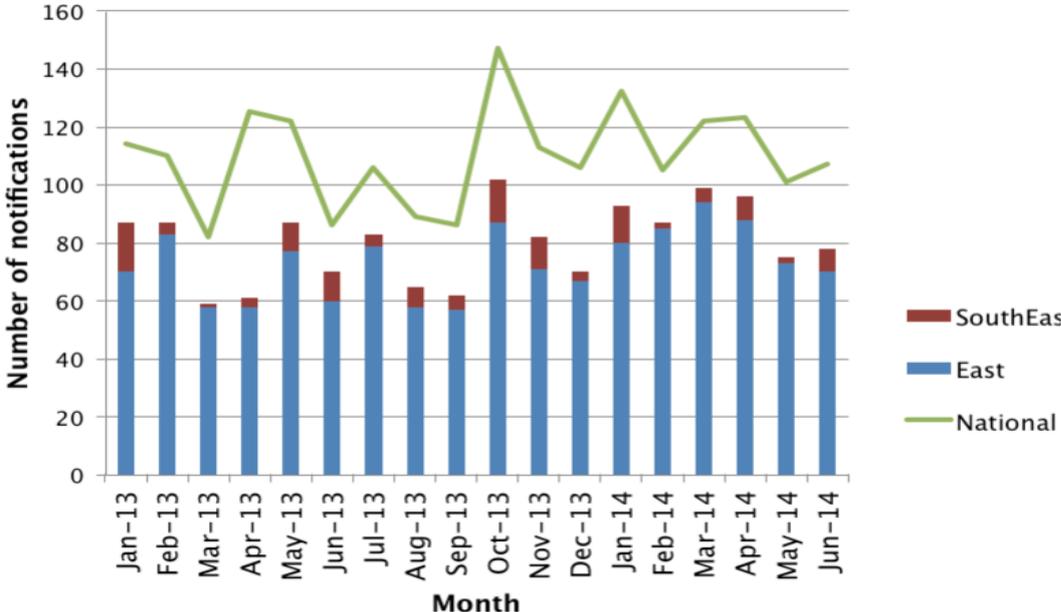
9.3.4 Communication plan for Senior Management in HSE and Department of Health

The Chair reported regularly on the work of the Group to the Medical Officer of Health in HSE-East, the Assistant National Director for Health Protection, the Director of Health and Wellbeing and Department of Health. These communications included notification of the formation of the Group and circulation of Briefing Reports on the following dates: 4th July 2013, September 13th 2013 and 25th November 2013.

9.4 Impact of control activities

The primary outcome measure of the work of the Group was a change in the number of notifications of gonorrhoea over the time period of the interventions. As can be seen in Figure 5, the rise in gonorrhoea notifications was halted, with a levelling of the numbers of notifications being maintained throughout 2014. However, the decline in the number of notifications did not return to the baseline rate. This was not unexpected as improved ascertainment is likely though wide use of highly sensitive NAATs and increased sampling of non-genital sites. In addition, it is possible that infection has been established in some hard to reach core groups. Over the 12 month period following the conclusion of the Gonorrhoea Control Group the halt in the numbers of gonorrhoea notifications was maintained (see Appendix J).

Figure 5: Number of gonorrhoea notifications in HSE-East, HSE-SouthEast and nationally by month, for the period January 2013 to June 2014



The social media campaign achieved wide reach, as described in the preceding section 9.1.1. This campaign may have led to some increase in demand for STI screening services as there were anecdotal reports from the clinics in Dublin of an increase in attendances. However, this could not be verified as information systems were not sufficiently developed to capture this information.

It would have been desirable to have an evaluation framework to assess the impact of the interventions, assessing process measures such as proportion of target population accessed, uptake of intervention, number and uptake of STI screening tests etc. However, the resources were not available to the Group to formally evaluate the interventions.

10. Other activities of the Gonorrhoea Control Group

A number of other activities, recommendations and information arose during the Group's tenure and these included:

- The Group provided a forum for discussion of the current guideline regarding routine epidemiological treatment of contacts. This led to research at Gay Men's Health Service which provided information that led to a change in clinical practice at that clinic.¹³
- Additional studies to further investigate the significance of pharyngeal only infection (POI) NAATs in MSM are in progress (For further information please contact HPSC, Dr Derval Igoe, Margaret Fitzgerald)
- Information on costs became available: it has been estimated that an additional screening clinics for men, of 2.5 hour duration for 24 clients, would cost be between €600 to €750, not inclusive of laboratory costs (personal communication MQ at GMHS, July 2013)
- The enhanced surveillance form developed by the Group has been further adapted into the national standard form, available at : <http://www.hpsc.ie/A-Z/HIVSTIs/SexuallyTransmittedInfections/Gonorrhoea/SurveillanceForms/File,14694,en.pdf>
- The enhanced surveillance data collection work, which involved contacts with a number of GPs, identified a need for a partner notification service for gonorrhoea cases managed in primary care. In addition, it was reported that GPs access to STI testing in laboratories was patchy and variable.
- The Gonorrhoea Control Group provided some input into an e-learning module on STI management in primary care, developed in 2013 as a joint initiative between the Irish College of General Practitioners and the GUIDE clinic with funding from the Crisis Pregnancy Programme.
- The experience of the information sub-group has led to the formation at the Crisis Pregnancy Programme of a multidisciplinary Communications Group.
- Demographic mapping of absolute numbers of young people and deprivation indices in the greater Dublin area will be of use in future sexual health needs assessment work.
- The Group reviewed the current arrangements in place with regard to source, cost and numbers of condoms being distributed by the various services involved in STI/HIV control in Dublin. This led to recommendations regarding national condom procurement.
- Members of the Group contributed to the development of STI outbreak guidelines document, and made suggestions in a number of areas based on experience gained from this work. (Guidelines in draft form, at time of writing and available at; <http://www.hpsc.ie/AboutHPSC/ScientificCommittees/Sub-CommitteesofHPSCSAC/OutbreakSub-Committee/>)

11. Conclusion of the Gonorrhoea Control Group

At the meeting held in May 2014 it was decided that the Group should prepare to conclude based on the interpretation of the latest surveillance report (Figure 5) which demonstrated a halt in the increase in notifications. Group members agreed that there had been no further increase in gonorrhoea notifications and that there was evidence that the information campaign had a positive impact.

At the next meeting, held 12th June 2014, the surveillance data was reviewed and it was agreed to conclude the Group on the basis of the sustained halt in the increase in notifications. It was agreed that the surveillance data would need to be monitored on an on-going basis to track trends and identify any further upsurge. A writing group was formed to prepare the report on the work of the Group (membership in Appendix B).

12. Discussion

The Gonorrhoea Control Group was formed to investigate and control the increase in notifications of gonorrhoea in the East coast region of Ireland. From the very start, it was clear to the Group that there were particular challenges in the interpretation of the routine surveillance data on gonorrhoea. Firstly, it was known there were a number of possible explanations for the significant year on year increases in notifications in HSE-East. These included the availability of the more sensitive NAAT tests during period 2009/2010, more STI screening with increased testing of extra-genital sites and, of course, a possible true increase in the burden of infection. Although changes in STI testing had been reported, there was no information available to the Group at population level on the number of people being tested and the numbers of tests being carried out, thus making it difficult to interpret the significance of the increase in positive tests. Another challenge arose from the limited information available from the routine surveillance data in HSE-East which did not include sexual orientation, anatomical site of infection or reason for testing.

Faced with these challenges, the Group decided at its first meeting that a detailed investigation of a representative sample of gonorrhoea notifications was required to better understand the local epidemiology of gonorrhoea infection. This was carried out through retrospective enhanced surveillance of all notifications in the first three months of 2013. Through highly effective multidisciplinary teamwork by personnel at clinics, primary care, laboratories, Public Health Departments and HPSC, data were collated on an impressive 96% of all notifications. Timely analysis resulted in the availability of information of excellent quality which was suitable for guiding appropriate control interventions.

Enhanced surveillance identified two groups as being at most risk of gonorrhoea infection: MSM and young heterosexuals. MSM accounted for over half the cases and over 40% MSM cases were born outside Ireland. The Group had not anticipated the finding of a high burden of infection among young heterosexuals, which included the finding that 80% of cases in females were aged less than 25 years.

The analysis revealed important differences in health-seeking behaviour between the two at-risk groups with almost half of young heterosexuals being diagnosed in primary care compared to only 12% of MSM. Also, two thirds of young heterosexuals were symptomatic, compared to only one third of MSM. Another important difference was a higher incidence of pharyngeal infection in MSM. For both groups, approximately one third had an STI co-infection at time of diagnosis, with 13% of MSM known to be HIV positive.

The information clearly indicated that there was a problem with gonorrhoea being transmitted within population groups. However, it was not clear to the Group whether or not there was sufficient information to declare an outbreak of gonorrhoea. The Group agreed to implement control activities and to continue to closely monitor the surveillance data. In the event, the status of the situation remained as an upsurge, but the activities of the Group were such that it acted as an Outbreak Control Team in every aspect except in name.

The control measures included communication to the health system about the upsurge and the need for heightened clinical awareness and preparedness to test and to treat cases appropriately as well as separate communications to the public at risk. Having identified the disparity between the information resources available for MSM compared to those available for young heterosexuals, the Group agreed that it would be necessary to set up a sub-group to develop resources for the latter group. This sub-group, referred to as the working group, was formed and tasked with developing health information materials for young heterosexuals. The information working group formed a very successful collaboration with statutory, youth and community organisations and used a partnership approach and peer involvement in developing and delivering the health information messages. The social media campaign on sexual health was a particular highlight, being the first such sexual health promotion initiative in Ireland. Arising from this work, the HSE has since formed a partnership Sexual Health Communications Group which is involved in national co-ordination of sexual health promotion activities.

The Group's second sub-group looked at existing resources for the diagnosis and treatment of gonorrhoea in the Dublin region. This collaborative work involved personnel based in Dublin at the three main STI clinics, the three main diagnostic laboratories and Public Health. This sub-group provided information on the high demand at STI clinics in Dublin, with approximately 1,400 people being seen per month. In addition, information on diagnostic tests was collated and, by extrapolating from quarterly figures, it was estimated that 80,000 NAATs and 8,000 culture and sensitivity tests were being carried out annually in Dublin in the years 2012 to 2014. A lot of time and effort went into gathering this information, demonstrating the need for information systems to be developed such that service activity data is more readily accessible.

Recognising the limitations in the routine data on gonorrhoea in most regions of the country, steps were taken to immediately improve the quality of the data in order to be able to adequately monitor the situation. These included a national agreement to improve data completeness and to include information on mode of transmission. In addition, HPSC developed a new CIDR report for use in Public Health Departments to monitor local gonorrhoea notification trends. The enhanced surveillance form which was developed by the Group has since been amended and it is now the standard form for national use.

During the time that this Group was in operation, there were no guidelines or reports available for dealing with this situation within the Irish context. Use was made of the UK guidance on managing STI outbreaks and incidents.¹⁴

However, arising from the considerable differences in the organisation of services between the two jurisdictions, the UK guidelines required significant adaptations for local use. The need for local guidance was apparent and this has since been addressed through the development of HPSC Scientific Advisory Committee guidelines on the management of STI outbreaks, co-ordinated by a subgroup of the Public Health STI & HIV Special Interest Group with direct input from a number of Group members.

Managing this incident also highlighted the need for a mechanism within the Health Service to adequately resource an appropriate response to prolonged outbreaks and incidents. In this incident, the Group functioned over a nineteen month period (with a further period of several months to complete the Group's report) and benefitted from input from members who took on this work in addition to their routine work. In addition, there were instances of professionals contributing to the Group during their own personal time. Also, the Group had planned to include an evaluation framework with a number of measures of impact identified to best evaluate the various interventions. However, it was not possible to measure these as funding was solely available for the information campaign for young heterosexuals. In the absence of measures of evaluation, it is difficult to identify what factors led to the control in the escalation of notifications.

A significant and memorable feature of the multidisciplinary Group was the range of interesting discussions related to gonorrhoea and STI control. Many of the ideas and suggestions shared at these discussions have since been acted upon and these include the formation of a communications group, a change in the protocol for epidemiological treatment of gonorrhoea contacts among MSM as well as the establishment of national procurement for condoms. All Group members agreed that it would be important that a national multidisciplinary group be in place, to advise and advocate for issues in relation to sexual health. In the interim, a sexual health strategy implementation group has been formed which is likely to be an appropriate forum from which a national advisory group will be formed.

Although the halt in the rise in gonorrhoea notifications has been achieved, and is likely to be attributable at to the work of the Group, it is clear that close monitoring of trends, both at population level and at sub-group level will need to be continued into the foreseeable future.

13. Conclusions

The Gonorrhoea Control Group achieved its two main objectives which were to investigate the increase in gonorrhoea notifications in HSE-East and HSE-SouthEast areas and to institute appropriate control measures. The investigation established the features of the two groups at most risk of gonorrhoea infection, MSM and young heterosexuals and this information was used to plan and deliver appropriate information targeted at each risk group. A multidisciplinary and partnership approach was used in all aspects of this work, which we believe contributed significantly to the effectiveness of the Group and its two sub-groups. A particular success was the use of social media in targeting messages to young people in terms of high levels of reach and effectiveness in raising awareness. Although the rise in gonorrhoea notifications has halted, there is a need for on-going close monitoring of gonorrhoea notifications under the improved routine surveillance system with preparedness to respond to any further increases or worrying changes in trends.

14. Recommendations and lessons identified

The following are the main recommendations and lessons identified by the Group:

14.1 Prevention:

- Develop sexual health promotion materials for young heterosexuals that are effective, informative and consistent with other health promotion messages and issues. Use of social media should be considered for the health promotion campaigns involving young people
- Continue funding and investment in the health promotion initiatives already in place for MSM, including the development of materials in multiple languages
- To reduce the burden of pharyngeal infection, materials should aim to raise awareness in the population about the risks associated with unprotected oral sex.

14.2 Diagnosis:

- Develop protocols and guidance regarding culture and antimicrobial sensitivity testing following gonorrhoea NAATs positive test results (in progress by HPSC SAC subcommittee on antimicrobial resistance in gonorrhoea)
- In the knowledge of concerns about development of further antimicrobial resistance in *N. gonorrhoea*, continue to support maintaining expertise in culture and sensitivity testing
- Establish a reference laboratory for *N. gonorrhoea* that monitors antimicrobial sensitivity of isolates on nationally representative samples
- Provide guidance and reminders to clinicians on the recommendations to test three sites in MSM. The enhanced surveillance work indicates that this is particularly important for clinicians working in primary care
- Recommend that all clinicians providing STI services have access to laboratory testing of extragenital sites
- Develop information systems in laboratories designed to facilitate timely information on laboratory activity and associated costs.

14.3 Treatment:

- Continue to advocate for correct antimicrobial treatment of gonorrhoea and raise awareness regarding possibility of antimicrobial resistance
- Develop information systems in clinics and in primary care to provide data on activity and costs
- Provide guidance, training and support to personnel working in Primary Care on the diagnosis and treatment of gonorrhoea, including access to partner notification services
- Undertake additional studies to further investigate the significance of pharyngeal only positive NAATs in MSM.

14.5 Surveillance

- Continue collecting information on the mode of transmission for all notified cases in addition to basic demographic data, so that trends can be monitored and the effectiveness of interventions evaluated
- Arrange that an electronic copy of the enhanced surveillance form used in this investigation is available for use in any further upsurge or outbreak of gonorrhoea in Ireland.

14.6 Public Health and wider health service

- Develop a process such that there is funding and support available for prolonged and complex STI incidents and outbreaks
- Group work that involves a number of different disciplines, including agencies external to the HSE, requires careful co-ordination such that objectives of the Group and those of the respective professional groups and agencies are achieved. Incident co-ordination was a key component of the effectiveness of this Group
- Evaluation of new public health interventions should be strongly encouraged and supported so as to understand their degree of effectiveness and help in preparedness for future events
- Management of this upsurge revealed the need for guidelines in Ireland for the management of STI outbreaks and incidents. These have since been developed and the draft guidelines were recently used to good effect in the LGV outbreak in HSE-East
- A suitable template to use in writing this report on a prolonged STI incident would have been very helpful. At present, the report is being used in HSE-East as a template to guide the writing of the more recent LGV outbreak. Based on this experience, this report should be made available to others managing similar incidents. Of assistance in writing this report have been the various interim reports which were prepared at various stages during the life of the Group

- In the investigation, personnel in Public Health made direct contact with a number of GPs in the collection of the enhanced surveillance data. These interactions resulted in a better appreciation of the challenges in Primary Care in relation to the correct management of gonorrhoea cases. However, the extent of the problem had not been anticipated and the information was collected informally. As a result, an opportunity was missed to formally report on the important observations in Primary Care which included problems with partner notification, limited availability of parenteral antibiotics, access to laboratory services and difficulties in arranging tests of cure etc.
- There is a need for national group to provide guidance on aspects of STI prevention and control
- This work clearly demonstrated the need for readiness within the health system to respond to gonorrhoea cases displaying antimicrobial resistance. Members of this Group are currently involved in developing national guidelines for the prevention and control of gonorrhoea and for minimising the impact of antimicrobial resistance in *N. gonorrhoea* (on completion, these guidelines will be available at HPSC website)
- In retrospect, this situation could have been judged to have been an outbreak. An important lesson identified is the need to regularly review the status of an incident and assign it to the most appropriate category. In this instance, maintaining the term upsurge throughout the life of the group did not result in any substantive difference to relation to the management of the situation. However, upgrading its status to that of an outbreak may have helped in relation to securing the necessary funding and supports required to evaluate the various actions carried out.

15. Acknowledgements

The members of the Gonorrhoea Control Group very much appreciate the support provided to this work by a wide range of personnel including health advisers, general practitioners, student health services, hospital clinicians, public health staff, laboratory staff, NGO personnel and HSE senior management.

16. References

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14. Health Protection Agency, Sexual Health Programme Board 2010 Guidance for managing STI outbreaks and incidents. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322200/STI_outbreak_guidance_SHPBApproved031110.pdf

17. Appendices

- A** Letter to GPs in HSE East, re management of gonorrhoea, Nov 2012
- B** Membership of sub-groups of Gonorrhoea Control Group
- C** Gonorrhoea enhanced surveillance form
- D** Information campaign for young heterosexuals: social media creatives/visuals
- E** Poster on Social Media
- F** Press release for information campaign
- G** Luv Bugs posters and business card-sized leaflets on gonorrhoea
- H** Summary of media reporting
- I** Sample article produced in print media, Nov 2013
- J** Graph of gonorrhoea notifications from Jan 2013 to June 2015

Appendix A



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Department of Public Health
HSE
Dr. Steevens' Hospital, Dublin 8
Tel. 01 635 2145
Fax 01 635 2103
dph.east@hse.ie

29th November 2012

To all General Practitioners in Dublin, Wicklow and Kildare

Management of gonorrhoea

Dear Doctor,

There has been a report of ceftriaxone resistant gonorrhoea in Ireland. This has occurred in a background of increasing antibiotic resistance being identified throughout Europe and worldwide.

This is a public health concern. I am writing to you to highlight the most recent recommendations for the management of suspected or confirmed gonorrhoea.

- All patients with suspected or diagnosed gonorrhoea should be referred to a STI clinic for contact tracing and for further STI testing (if these services are not available within the patient's General Practice).
- Most cases are initially investigated by urine/swab NAAT testing. Whenever feasible, culture of specimens should be carried out so that susceptibility testing can be performed and resistant strains identified.
- All suspected or confirmed cases of gonorrhoea should receive:

Ceftriaxone 500mg IM PLUS Azithromycin 2gr PO¹ (single dose of each).

This treatment is also suitable for pregnant or breastfeeding women.

Those with cephalosporin/penicillin allergy should be referred to a STI clinic for appropriate management.

Please note: treatment with oral cefixime or ciprofloxacin are **no longer adequate first line treatments** due to the changing antibiotic resistance profile of *Neisseria gonorrhoeae*

- A test of cure, using NAAT, should be obtained TWO weeks after completion of antibiotic therapy. If result is positive, refer to STI clinic for appropriate management.
- If patient has persisting symptoms or signs following treatment, refer to STI clinic for appropriate management.

Please feel free to contact me if you have any queries.

Yours faithfully,

Dr. Fionnuala Cooney,
Specialist in Public Health Medicine.

MCRN: 01464

Reference

1. Unemo M. The '2012 European guideline on the diagnosis and treatment of gonorrhoea in adults' recommends dual antimicrobial therapy. Eurosurveillance 22nd Nov 2012, available at: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20323>

For further information please see:

<http://www.bashh.org/guidelines%20>

http://hsenet.hse.ie/Hospital_Staff_Hub/mullingar/PPPG's_Midland_Area/Integrated_Services_PCCC_/STI_Sexual_Trans/

<http://www.hpsc.ie/hpsc/A-Z/HIVSTIs/SexuallyTransmittedInfections/Gonorrhoea/>

Appendix B

Membership of the Working Group for the information campaign for young heterosexuals (information sub-group)

| | |
|------------------------------|--|
| Dublin AIDS Alliance | Susan Donlon (Chair) |
| SpunOut.ie | John Buckley |
| Union of Students in Ireland | Denise McCarthy |
| HSE | Roisin Guiry, Crisis Pregnancy Programme Elizabeth Ann McKeivitt, Health Promotion and Improvement Department |

Membership of the resources for services sub-group

The sub-group met on six occasions and prepared a report for the Gonorrhoea Control Group on how best to improve service capacity to respond to any increased demand for STI services.

| | |
|-------------------|---|
| Public Health | Fionnuala Cooney, HSE East (Chair) |
| Clinical services | Fiona Lyons, GUIDE Mick Quinlan, GMHS Jack Lambert, MMUH Rachael Howard, MMUH Miriam Daly, Primary Care, general practice Niamh Murphy, Primary Care, student health service |
| Laboratories | Helen Barry, SJH Michelle Gaffney, MMUH Ursula Fox, MMUH Sara Woods, NVRL Jeff Connell, NVRL Paul Holder, NVRL |

Membership of Gonorrhoea Control Group report writing sub-group

Fionnuala Cooney (Chair), Susan Clarke, Phil Downes, Margaret A Fitzgerald, Derval Igoe, Louise Pomeroy, Keith Ian Quintyne.

Appendix C

Gonorrhoea Enhanced Surveillance Form



Gonorrhoea Upsurge Surveillance Form HSE-E

Finalised version – v1.0 11/04/2013

CONFIDENTIAL

Page 1 of 2

CIDR Event ID

Section A: Patient information

1. Patient Clinic ID: 2. Clinic/Practice Name/Service:

3. Patient Firstname: 4. Patient Surname:

5. County / Postcode of residence: 6. Sex: F M

7. Date of birth: 8. Country of birth:

9. Ethnicity **White:** Irish Irish Traveller White other
Black or Black Irish: African Black other
Asian or Asian Irish: Chinese Asian other
 Other or mixed ethnicity Unknown

If other or mixed ethnicity, please state

10. Sexual Orientation: Heterosexual Homosexual Bisexual Unknown

Patient label may be attached here

Section B: Clinical details

11. Please select one reason for attending clinic/practice/service:
 Symptomatic GP referral
 Routine STI screen Student health referral
 Contact tracing Other reason

12. If referral or other reason, please specify:

13. Was patient symptomatic of gonorrhoea? Yes No

14. If yes, which symptoms?:
 Discharge and/or dysuria Other symptoms, please specify:
 Rectal symptoms
 Sore throat

15. HIV status: Positive Negative Unknown 16. If positive, year diagnosis:

17. Other current co-infections: Yes No

18. If, yes, other current co-infections, please tick those that apply:
 Anogenital warts Syphilis
 Chlamydia Other co-infection, please specify:
 Herpes simplex

19. Has patient been diagnosed with an STI in previous 12 months? Yes No Unknown

20. If yes, please give details:

Section C: Acquisition and Sexual Contacts

21. Country of Infection: 22. Probable place/city of acquisition:

23. Number sexual contacts in last 3 months (prior to diagnosis):
 1 contact 2-5 contacts 6-10 contacts 11-20 contacts >20 contacts

24. Were contacts in the last 3 months: Male only Female only Male & Female

25. Any social/sexual network implicated?
e.g. bar, sauna, internet etc.

Gonorrhoea Upsurge Surveillance Form HSE-E

Finalised version – v1.0 11/04/2013

CONFIDENTIAL

Page 2 of 2



Patient identifiers for page 2 of form:

Patient Clinic ID:

Date of birth:

Section D: Laboratory information

26. Laboratory name(s):

27. Laboratory Results (*tick all that apply*)

| | <u>Culture</u> | | | <u>NAATs</u> | | | <u>Microscopy</u> | | |
|------------|--------------------------|--------------------------|--------------------------|--------------|--------------------------|--------------------------|---|--------------------------|--------------------------|
| | Pos | Neg | ND* | Pos | Neg | ND* | Gram Negative diplococci seen | | |
| | | | | | | | Yes | No | ND* |
| Endocervix | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Endocervix | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pharyngeal | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Pharyngeal | <input type="checkbox"/> | <input type="checkbox"/> | Urethral | <input type="checkbox"/> | <input type="checkbox"/> |
| Rectal | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Rectal | <input type="checkbox"/> | <input type="checkbox"/> | Other site | <input type="checkbox"/> | <input type="checkbox"/> |
| Urethral | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Urine | <input type="checkbox"/> | <input type="checkbox"/> | Details of other microscopy site <input type="text"/> | | |
| Other | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Urethral | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| | | | | Other | <input type="checkbox"/> | <input type="checkbox"/> | | | |

28. If "Other" ticked above for culture, NAATs or microscopy, please give details:

Section E: Comments

Section F: Form Completed by

29. Completed by:

30. Date:

Thank for completing the form!

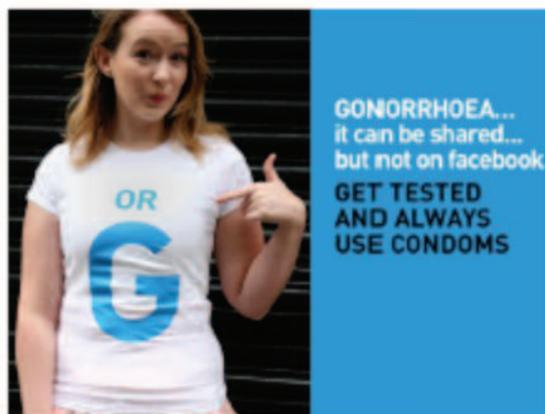
Please return the completed form in a sealed envelope marked "Private and Confidential" to:

Dr Margaret Fitzgerald (Director of Public Health),
Department of Public Health HSE-E,
Room G29,
Dr Steeven's Hospital,
Dublin 8.

ND* = laboratory test not done

Appendix D

Social media creatives/visuals



ABCDEF

G

GONORRHOEA...
HARD TO SPELL... EASY TO CATCH

Gonorrhoea infections are increasing among young men and women.
Get tested and always use condoms

www.yoursexualhealth.ie



OM

G

GONORRHOEA...
ITS TRENDING... BUT NOT ON TWITTER

You can have Gonorrhoea and not have any symptoms.
Get tested and always use condoms

www.yoursexualhealth.ie



OR

G

GONORRHOEA...
IT CAN BE SHARED... BUT NOT ON FACEBOOK

You can get Gonorrhoea from oral sex.
Get tested and always use condoms

www.yoursexualhealth.ie



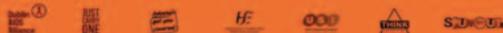
S'UP

G

GONORRHOEA...
FREE TO TEST, FREE TO TREAT

Gonorrhoea infections are increasing among young men and women.
Get tested and always use condoms

www.yoursexualhealth.ie



Appendix E

OMG... GONORRHOEA... IT'S TRENDING

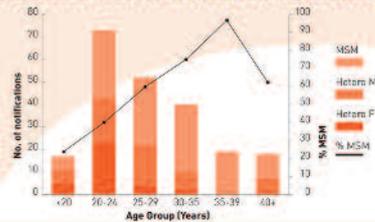


A SOCIAL MEDIA CAMPAIGN FOR GONORRHOEA CONTROL IN IRELAND SUSAN DONLON¹, FIONNUALA COONEY², DERVAL IGOE³

BACKGROUND: GONORRHOEA INFECTIONS INCREASE IN IRELAND 2012 AND 2013

ISSUE:

Rise in number of gonorrhoea cases in Eastern counties in Ireland in 2013. The figure shows the number of gonorrhoea cases and proportion of men who have sex with men (MSM) by transmission category and age group notified in East and South-East Health Regions of Ireland, Q1-2013 (Health Protection Surveillance Centre, Ireland).



- Multidisciplinary Control Group convened in December 2012 consisting of Specialists in Public Health, Consultants in Genito-Urinary Medicine and Infectious Diseases, General Practitioners, Surveillance Scientists, Healthcare Managers as well as Health Promotion and Public Communications experts.
- Retrospective collection of enhanced surveillance information on gonorrhoea notifications in the East and South East regions of Ireland.
- Two main risk groups identified: **(1)** Men who have sex with men; **(2)** Young heterosexuals.
- Identified need for a gonorrhoea information campaign targeting specifically young heterosexuals, as an information campaign targeting MSM was already in progress by the Gay Health Network.

METHODS: A SOCIAL MEDIA GONORRHOEA INFORMATION CAMPAIGN TARGETING YOUNG PEOPLE

EXPERT WORKING GROUP:

A Working Group of statutory, youth and community organisations was established in September 2013 to develop the campaign. The Working Group consisted of experts in health promotion, social media experts, and organisations experienced in working with young people. Partners for the campaign were Dublin AIDS Alliance, Health Service Executive Crisis Pregnancy Programme, SpunOut.ie, The Union of Students in Ireland and the HSE Health Promotion and Improvement Department (who also provided support funding for the campaign).

Aim of the campaign:

to develop and implement a social media campaign to raise awareness of increasing gonorrhoea infections in Ireland.

Objectives:

- (1)** to promote information about gonorrhoea symptoms, transmission, prevention and testing;
- (2)** to promote the consistent use of condoms for sex, including oral sex;
- (3)** to promote regular STI testing, and particularly the availability of free testing.

Target Population Group:

Young (heterosexual) people, primarily aged 18 to 25 years.

CAMPAIGN (PEER) DEVELOPMENT:

- Youth-proofing guidelines were used, taking account of the Working Group organisations previous experiences, including the use of eye-catching imagery, use of humour, quick and clear information and positive and non-judgemental messages.
- Young people volunteered to model for the visuals, and all visuals and key messages were 'tested' with young people.
- Young people chose the hashtag - #OMGsti - for use during social media promotion.

CAMPAIGN RESOURCES:

- Website - www.yoursexualhealth.ie
- Visuals and posters developed for social media promotion including signposting to the campaign website.
- A pocket-sized information booklet.

CHANNELS OF PROMOTION:

- Facebook
- Twitter
- Irish (men and women's) lifestyle websites
- Print and Broadcast Media

DATES OF IMPLEMENTATION:

December 2013 to mid-February 2014



RESULTS: LARGE YOUNG AUDIENCE REACHED THROUGH SOCIAL MEDIA CHANNELS

WEBSITE (WWW.YOURSEXUALHEALTH.IE):

- 59% increase in website visits compared to the same period a year previous to the campaign.
- 48% increase in page views, from 9,053 page views to 13,369 page views.
- 91% increase in page views on free STI testing clinic information.



FACEBOOK:

- Up to 190,000 people reached through working group partners' Facebook pages.
- An engagement rate of 6% was recorded on one partner Facebook page (Just Carry One), well above a 1.11% benchmark for similar pages (research by www.socialbakers.com).

REACHING THE TARGET AUDIENCE VIA FACEBOOK:

- Of the people who engaged with the Facebook campaign posts on the 'Just Carry One' page (www.facebook.com/justcarryone), 53.7% were female and 46.3% were male.
- Of the females, 95.9% were aged 24 and younger with 66.5% aged 13 to 17 and 29.4% aged 18 to 24.
- Of the males, 98% were aged 24 and younger with 69.5% aged 13 to 17 and 28.5% aged 18 to 24.

TWITTER:

- The hashtag, #OMGsti, trended on Twitter in Ireland on the first day of the campaign, reported by Trendsmap Ireland.

LIFESTYLE WEBSITES:

- The campaign culminated in a Valentine's Day promotion on popular Irish lifestyle websites Joe.ie (for men) and Her.ie (for women).
- Promotion included an editorial (viewed 6,620 times) and a competition (with 795 entries).
- Of the referrals to the campaign website on the final week of promotion (10th to 16th February 2014), 44% came from Her.ie and 16% from Joe.ie.

MEDIA COVERAGE:

Considerable media interest with articles published in all print and online media, national and local radio broadcasts and one broadcast on a national TV channel.

CONCLUSIONS & RECOMMENDATIONS: USING SOCIAL MEDIA EFFECTIVE IN REACHING YOUNG PEOPLE FOR SEXUAL HEALTH PROMOTION



- The gonorrhoea information campaign was successful in reaching the target audience.
- Using social media channels to target a young audience in sexual health promotion was very effective.
- Involving peers in campaign development was successful with engaging a young target audience.
- Communications and collaboration between the multi-disciplinary Control Group and the expert Working Group was very beneficial to the development of the campaign with input from a range of experts and linking up-to-date surveillance data with key messages of the campaign.
- The work of the Multi-disciplinary Control Group was discontinued in June 2014 once the rise in Gonorrhoea notifications was halted.

- Build on the campaign's success to develop a national STI Prevention campaign.
- Utilise social media channels for future sexual health campaigns targeting young people.
- Engage with and involve young people with development of similar future campaigns.
- Resource the expert Working Group and multi-disciplinary Control Group to continue collaborative and cross-sectoral work on STI prevention.

Author Affiliations: ¹Dublin AIDS Alliance, Dublin, Ireland; ²Department of Public Health, Health Service Executive: East, Dublin, Ireland; ³Health Protection Surveillance Centre (HPSC), Dublin, Ireland

For more information contact susan.donlon@dublinaidalliance.ie

ESCAIDE 2014: 6-7 November 2014, Stockholm, Sweden

Appendix F

Media Book prepared by HSE Communications Dept 15th Nov 2013

Summary of media coverage of press release issued during sexual health awareness week (SHAW), with details of source, media, headline and date of publication

Irish Times PRESS News in numbers 14-Nov-2013
Irish Daily Star PRESS STI OUTBREAK SPARKS HEALTH ALERT 14-Nov-2013
Irish Examiner PRESS HSE control team targets outbreak of gonorrhoea 14-Nov-2013
Metro Herald PRESS Gonorrhoea cases up by a third each year 14-Nov-2013
Irish Independent PRESS Gonorrhoea on the rise, warns top HSE medic 14-Nov-2013
Independent.ie INTERNET Gonorrhoea on the rise, warns top HSE medic 14-Nov-2013
NewsTalk (Backup) BROADCAST Discussion about Newspaper Reviews 14-Nov-2013
irishexaminer.com INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
waterford-news.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
news.eircom.net INTERNET 13:00: Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
roscommonherald.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
kildare-nationalist.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
Leitrimobserver.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
eveningecho.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
irishexaminer.com INTERNET Gonorrhoea cases up by a third since 2011 13-Nov-2013
westernpeople.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
Dundalkdemocrat.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
tipperarystar.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
donegaldemocrat.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
kilkennypeople.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
thejournal.ie INTERNET Over 1,000 people in Dublin, Wicklow and Kildare have contracted gonorrhoea this year 13-Nov-2013
Independent.ie INTERNET Surge in gonorrhoea infections in Ireland 13-Nov-2013
Irishtimes.com INTERNET HSE concerned at upsurge in gonorrhoea cases 13-Nov-2013
Rte.ie INTERNET HSE warns of rise in gonorrhoea infections 13-Nov-2013
breakingnews.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
Kildare FM BROADCAST Dublin:Gonorrhoea infections on the increase warning:HSE 13-Nov-2013
Northern Sound BROADCAST Rapid increase in gonorrhoea 13-Nov-2013
nationalist.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
limerickleader.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
leinsterleader.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
offalyexpress.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
leinsterexpress.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
Independent.ie INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
carlow-nationalist.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
wexfordecho.ie INTERNET Gonorrhoea cases up by a third since 2011 13-Nov-2013
news.eircom.net INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
belfasttelegraph.co.uk INTERNET Rise in number of gonorrhoea cases 13-Nov-2013
laois-nationalist.ie INTERNET Sharp rise in gonorrhoea cases since 2011 13-Nov-2013
irishexaminer.com INTERNET HSE control team targets outbreak of gonorrhoea 13-Nov-2013
Spin FM BROADCAST Rise in number of people diagnosed with gonorrhoea in Dublin 13-Nov-2013

NOTES:

For more information on Gonorrhoea visit www.yoursexualhealth.ie

Twitter Accounts for the Campaign Partnership:

@SpunOut

@TheUSI

@thinkjohnny

@DubAIDSAlliance

@justcarryone

Partnership Websites:

www.spunout.ie

www.thinkcontraception.ie

www.usi.ie

www.dublinaid alliance.ie

Trends in STIs in Ireland, including Gonorrhoea 1995-2012: <http://www.hpsc.ie/hpsc/A-Z/HIVSTIs/SexuallyTransmittedInfections/Publications/STIReports/STIAnnualandQuarterlyReports/2012/>

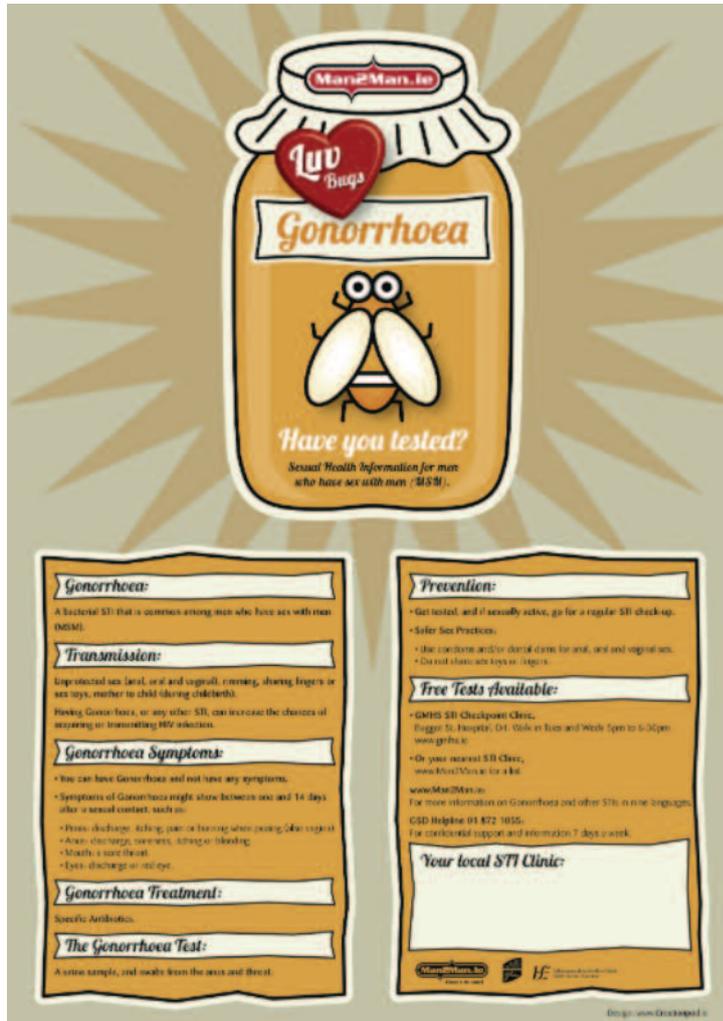
For more details on the data/numbers of cases see Weekly reports:

<http://www.hpsc.ie/hpsc/NotifiableDiseases/WeeklyIDReports/>

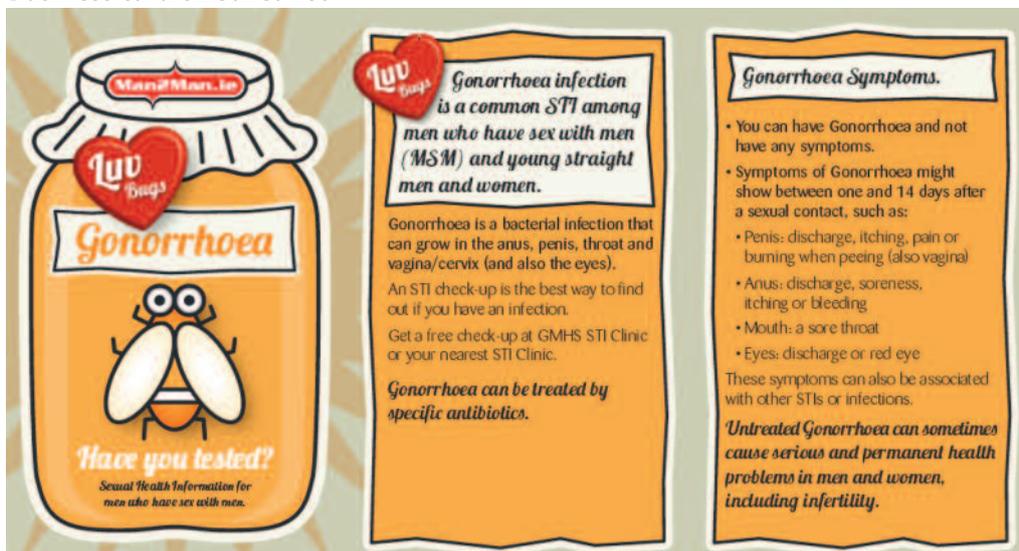
Appendix G

Bugs posters and business card-sized leaflets on gonorrhoea produced by man2man.ie

Poster



Business card-sized leaflet



Appendix H

Sample article produced in print media in response to press release, November 2013

Daily **IRISH** Mail

Date 14 November 2013
Page 16



HSE warning of STD risk as 1,077 cases diagnosed

MORE than 1,000 people have contracted gonorrhoea this year, according to the HSE.

The HSE issued a statement yesterday to highlight the growing number of people diagnosed with the sexually transmitted disease.

A total of 1,077 cases have been detected so far this year, compared to 1,110 for the whole of 2012.

The HSE warned of the dangers of the STD, stating the figure has increased by 33 per cent since 2010.

The Leinster area has been particularly affected by the outbreak, in particular, Dublin, Wicklow and Kildare, with 817 cases diagnosed last year, compared to 613 the previous year.

Dr Margaret Fitzgerald, HSE East director of public health, said: 'This upsurge in gonorrhoea is a cause of concern, as untreated or inadequately treated gonorrhoea may lead to severe complications including infertility in men and women. She said 'emerging antimicrobial resistance' to gonorrhoea was concerning and it was possible some forms of the infection 'may become untreatable in the near future.'

Dr Fitzgerald said some 60 per cent of women and 10 per cent of men with urogenital gonorrhoea may not be aware they have the infection.

'We're also concerned that infection with gonorrhoea may facilitate the transmission/acquisition of HIV, and because many cases are asymptomatic – approximately 50 per cent of women and 10 per cent of men with urogenital gonorrhoea have no symptoms – many people may not be aware of their infection or risk.' Dr Fitzgerald

By **Sandra Mallon**

warned sexually active people should use protection, and emphasised the importance of regular sexual health screenings, as untreated gonorrhoea can lead to further complications.

The surge in the spread of gonorrhoea has become increasingly common in other countries, particularly in the UK, which has seen a 21 per cent rise in the same length of time.

The research prompted the HSE to establish 'an outbreak control team', which carried out 'enhanced surveillance on all gonorrhoea cases' notified during the first three months of this year in the east south east areas.

The study revealed young heterosexuals and gay men were the two groups most at risk, with results showing a 44 per cent total of the figures.

Last year, the Health Protection Surveillance Centre, said the rate of gonorrhoea is now 24.1 per 100,000 people, the highest ever recorded.

The HSE will also be working with Spunout.ie, the Union of Students in Ireland, the Dublin Aids Alliance and the THINK contraception campaign over the coming weeks and into 2014, to help promote safer sex, prevention of STDs and, where needed, access to testing and treatment services.

Meanwhile, Susan Donoh of the Dublin AIDS Alliance said: 'We urge everyone to follow simple steps for protection – get accurate and reliable information on sexually transmitted infections, always use a condom when having sex, and reduce your number of sexual partners.'

sandra.mallon@dailymail.ie

Appendix I

Embargo Monday 9th December 2013 @ 11am

PRESS RELEASE - 9th December 2013

OMG: Gonorrhoea...It's Trending

New campaign aims to get Gonorrhoea prevention messages trending on Twitter #OMGsti

Dublin AIDS Alliance, the Union of Students Ireland, SpunOut.ie, the HSE Crisis Pregnancy Programme and Think Contraception, are aiming to tackle the rise in Gonorrhoea cases with a new social media campaign. Between 2011 and 2012 there was a 33% increase in Gonorrhoea cases, and young men and women aged 17 to 29 years have been identified as a particular at risk group. The tongue-in-cheek style of key messages for the campaign will help with getting the information across to young adults in both a humorous and factual way.

Key messages will be promoted primarily using online resources – Facebook, Twitter and websites from Monday 9th December and will continue into 2014. Social media messages will promote safer sex, prevention of sexually transmitted Infections (STIs) including the consistent use of condoms, and STI testing and treatment services. The use of social media will enable the campaign messages to reach a large national audience.

The campaign has been funded by the HSE and was prompted by a steady rise in cases of Gonorrhoea over recent years. Dr Fionnuala Cooney, Public Health Specialist with the HSE, said today that 'our ability to test for gonorrhoea has improved in recent years, and more sensitive tests, and more numbers attending for screening may account for some of the increase – however, we know that unsafe sexual behaviour is a significant driver of the increase in cases of Gonorrhoea and other STIs.'

Susan Donlon, Dublin AIDS Alliance, said "It is vital that young people can make informed decisions about their sexual health, and how to prevent the transmission of Gonorrhoea and other STIs. The campaign's website, www.yoursexualhealth.ie, provides information on the facts about Gonorrhoea, safer sex, where to access free STI testing, and where to access free condoms."

Denise McCarthy, Union of Students in Ireland, said "We urge everyone to follow simple steps for prevention - get accurate and reliable information on STIs, always use a condom when having sex, and talk to your partner(s) about STI testing and using condoms. People can have Gonorrhoea and not have any signs or symptoms, so regular STI testing is encouraged, particularly if you have many sexual partners or if you have ever had unprotected sex. Testing is free in public STI clinics."

An information booklet is also available and will be widely distributed, particularly for organisations working with young people who don't have easy online access. Outreach activities and providing access to, and distributing, free condoms will also form part of the campaign to ensure those most at risk are aware of how to prevent STI transmission.

ENDS

Appendix J

Notifications of gonorrhoea in HSE-East, HSE- SouthEast and nationally by month, for the period January 2013 to June 2015

