3. Prevention of gonorrhoea

This section explores prevention strategies to reduce transmission of gonorrhoea so that the subsequent chance of AMR transmission will be reduced. A meta-analysis of sexual health interventions found that change in knowledge, attitudes and behaviours can happen if they include a combination of approaches that are appropriately placed within the overall context of prevention, health promotion and individual well-being [31] (Appendix 4).

The arguments are presented below for free-access to condoms and to STI-testing as proven interventions to prevent transmission of gonorrhoea and are recommended. However, knowledge of STIs and condom use skills alone is not enough to equip people with the means to reduce STI risk. For example, interventions need to place greater emphasis on: entering and maintaining healthy relationships and behaviours; awareness of risks attached to different forms of concurrency and how concurrency arises; skills to redress power imbalances and building self-esteem [32]. Consideration needs also to be given to the influence of alcohol and drugs on sexual behaviours.

Alongside clinical responses, promoting safer sexual and health-care-seeking behaviour among individuals is vital. Thus, population level awareness-raising, as well as high risk-group-tailored interventions, is suggested. Gonorrhoea is transmitted through unprotected vaginal, oral or anal intercourse or genital contact with an infected sexual partner. Therefore, safer sex programmes that promote condom use and regular STI testing are crucial. Gonorrhoea with short-lived, high transmission probability means that it is, generally, not the number of acts of unprotected sexual intercourse but the number of sexual partners that is most relevant from a public health perspective [33].

3.1 Condom use

For those engaging in any form of sexual behaviour, coital intercourse, anal or oral sex, the use of male condoms remains a critical component of safer sexual practice. Condoms are the most commonly used safer sex mechanism among adolescents [34, 35, 36]. Young people tend to have concurrency of partners with short time frames between relationships and so gonorrhoea may be more of a risk.

A recent study of first time patients in Cork found that a major risk factor of STIs among 13-19 year old males was only sometimes or never using condoms [37]. Male condoms are relatively easily accessible and available to everyone; there is no need for a prescription [38].

VAT on condoms makes Irish-bought condoms the most expensive in Europe. The Irish Study of Sexual Health and Relationships found cost was one of the reasons given for not using condoms, alongside lack of education and awareness of the risks [39]. As part of an ongoing commitment to improving young adults' sexual health in the UK, Public Health England and Brook (the largest young people's sexual health charity in the UK) support condom-card schemes. Condom-card schemes, such as C-Card, are schemes which provide free condoms to young people who are registered with them and have received education on their use. They aim to ensure easy access to sexual health advice and free condoms for young people and could be replicated in Ireland.

One of the most difficult tasks for educators is facilitating the personalisation of risk into daily encounters, especially within the context of steady relationships [40]. People's sense of invulnerability and belief in their own ability to successfully assess risks becomes validated when they participate in risky sexual practices and appear to survive unscathed. This is exacerbated by the fact that gonorrhoea may be asymptomatic.

A Cochrane systematic review found behavioural interventions for young women which aim to promote sexual behaviours protective of STI transmission can be effective, primarily at encouraging condom use [41].

Intentions to use condoms with casual sexual partners can be increased through developing skills around how to initiate condom use [42]. In addition, targeted interventions for high risk individuals will be more effective once the variables related to their inaccurate risk perceptions are understood. "*Feelings of love may override an objective evaluation of risk*" [43]. Perceived risk may decrease over the duration of a relationship even if the risk behaviour, i.e. unsafe sex, continues.

3.2 Regular STI tests

The value of regular STI testing for the sexually active population and especially for high risk groups is clear. Evidence from elsewhere indicates that by encouraging STI testing, safer sexual practices are likely to ensue. For example, in the UK, following the 2014 National Chlamydia Screening Programme, a web survey found that many respondents reported that testing had an impact on their knowledge and/or their sexual risk behaviour:

- 66% more likely to test again in future;
- 62% more likely to use condoms with new partner;
- 59% know how to avoid chlamydia in future;
- 30% more likely to have fewer sexual partners [44].

3.3 Changing condom-use and STI testing behaviour

Evidence suggests that the following characteristics are key elements for success in changing or establishing behaviours like condom use and STI testing:

- Using theoretical models in developing interventions, for example, social cognitive frameworks such as the health belief model and the theory of reasoned action [43].
- Using multiple levels of awareness raising and information sharing, for example:
  - Relationship and Sexuality Education (RSE) programmes in schools and other centres of learning;
  - Media campaigns (social media e.g. Twitter and posters with high visibility);
  - Health care settings with posters and health care professional input;
  - Clear political leadership as, for example, the introduction of the Irish Sexual Health Strategy;
  - Increased and advertised sexual health resources;
  - Clear Department of Justice policy on safer sex in prisons (e.g. in the UK, The Howard League of Penal Reform, 2015 [45]).
- Providing targeted and tailored information, in terms of sex, age, culture, sexual identity and orientation. For example, the Gay Health Network's 'Luv Bugs' project targeting MSM to raise awareness about increasing gonorrhoea infections, testing and prevention. A similar campaign is needed in Irish prisons for more than just 'pre-release courses'.
- Using needs assessments and formative research. Formative research can "guide development and evaluation of interventions to enhance sexual health communication within partnerships and within social networks, as a potential harm reduction strategy to foster healthier partnerships" [46].
- Providing basic accurate information through clear, unambiguous messages, for example, through RSE education in schools or the Irish OMG campaign 2013-2014 (Appendix 5).
- Using behavioural skills training, including self-efficacy, so that individuals feel confident to:
  - buy condoms,
  - ask that condoms be used,
  - put them on effectively, and to
  - go for STI screening.
- Joining up services with community provisions, e.g. situate sexual health services in accessible community settings.
- Addressing peer norms and social pressures, for example, work with voluntary and support agencies (NGOs) for high risk groups, as well as the educators of young people, to challenge heteronormative and sexualised notions about relationships.

Long-term follow-up is needed as most changes in health behaviour need constant reinforcement [47].

Social marketing is a useful tool for sexual health promotion e.g. increasing condom use. Social marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviors that benefit individuals and communities for the greater social good [48].

3.4 Media campaigns

In order to effect risky sexual behaviour change, awareness of AMR in gonorrhoea needs to increase; the media can increase awareness quickly and effectively [49]. When public discussion is likely to facilitate the educational process, media messages can be emotional and thought provoking; they can be targeted at many different levels, stimulating discussion and so expand the impact of a message. When the behavioural goals are relatively easy to understand i.e. condom use and regular STI testing, mass media campaigns have been effective when supported by political commitment, policies and educational interventions (e.g. Swiss campaigns). Until recently such awareness-raising interventions have been expensive. New media channels such as Twitter, Snapchat, Facebook, Instagram and blogging, create possibilities for the widest possible exposure in the delivery of health-related information with relatively little cost.

Social media provides a relatively inexpensive way to directly access individuals in non-intrusive ways, as well as the technical ability to provide tailored information. Swanton *et al.*'s (2015) meta-analysis found that new media interventions can lead to significant increases in positive sexual health behaviours in non-clinical populations [50]. Interactivity of the intervention, target population and study design influenced the efficacy of interventions on condom use, whereas intervention duration influenced sexually transmitted infection testing. Interventions aimed at improving condom use were more successful when an interactive component was used. Further research was suggested to explore how best to reach specific high risk populations [50].

Effective media campaigns are usually one element of broader sexual health promotion programmes with mutually reinforcing components:

- Mobilising and supporting local agencies and professionals who have direct access to individuals within the target population;
- Bringing together partnerships of public, voluntary and private sector bodies and professional organisations;
- Informing and educating the public, but also setting the agenda for public debate about the topic, thereby modifying opinion surrounding it;
- Encouraging local and national policy changes so as to create a supportive environment within which people are more able to change their behaviour.

Public health campaigns need to be aligned, with increased involvement of NGOs, with government and health organisations.

3.5 Reframing the sexual health messages

Prevention messages need to be targeted at every sexually active man and woman, and those who are not yet sexually active. With an increased awareness of risks, individuals may postpone sexual intercourse and/or be better able to resist peer pressure to engage in activities with which they are not comfortable. This includes the identified high risk population groups (MSM, prisoners, young people and sex workers) to reduce their risk of getting and transmitting gonorrhoea.

The way sexual health knowledge and information is framed in its delivery could be altered to make it personal rather than general; otherwise the information will be stored in the reservoir of objective knowledge that has little or nothing to do with the individual [43, 51]. Important sexual health messages need to remain personal, pertinent and readily available if or when sexually charged situations arise.

In medical literature the effect is well documented; showing that positive framing in terms of survival rates lead to "*risk-averse*" choices while negative framing in terms of mortality rates increase *"risk tolerant"* decision-making [52]. Such framing effects appear to be similar to the negative effects of fear in health promotion media messages [53]. The limited effect of public sexual health campaigns has been blamed on the emphasis on the negative consequences of sexual activity; reframing messages with an emphasis on the pleasure in using condoms (both male and female) alongside safer sex messages, is more effective for consistent condom use [54].

In addition, if interventions target specific groups in order to take into account the types of relationships (steady or casual) and the meaning of the relationships and sex itself they will be more effective. Below are two examples of slogans with this in mind:

"I care about you therefore I will use a condom",
or, for casual sex
"Feel good about condoms, carry them with you and use them: you are worth it." [55].

3.6 At risk population groups

MSM and young heterosexual men and women were two population groups identified by the Gonorrhoea Control Group (investigating an upsurge of gonorrhoea cases in the East and South-East of Ireland in 2011-2012) as requiring special consideration [20]. The HSE Gay Men's Health Service and various non-government organisations, as well as the HSE funded Man-to-Man project, all run sexual health promotion campaigns. These need to be aligned and coordinated.

There is currently no evidence around "prison sex" in Irish prisons but the authors advocate additional support for prisoners, as a highly vulnerable population. This includes a need for access to free condoms, sexual health information and appropriate STI testing.

3.7 Informing professionals involved in sexual health services

The HSE course 'Foundations in Sexual Health Promotion' was developed by HSE South in Cork and is now being rolled out in Kilkenny, Carlow and Galway. Once evaluation is completed (by Trinity College, Dublin) it is possible that this course, delivered over five months, could be the basis for health and education professionals to gain better understanding and skills to deliver opportunistic sexual health messages; including the importance of safer sex and regular STI testing to their clients throughout the life course i.e. young and old.

Recommendations

- Sexual health promotion:
  - Include a combination of approaches in programmes for STI reduction (prevention, health promotion and individual well-being).
  - Sexual health promotion campaigns targeting various groups need to be aligned and coordinated within a nationally framed programme for maximum effect.
  - Ensure STI reduction programmes are ongoing and long-term.
  - Consideration needs to be given to a standardised policy in prisons to give prisoners access to free condoms, sexual health information and appropriate STI testing.
- Promotion of condoms:
  - Large-scale free distribution of condoms.
  - Free condom education and distribution scheme for young people, up to 25 years old e.g. a condom card scheme in Ireland. At present, there is a national condom distribution service through which services can access condoms. See http://www.crisispregnancy.ie/support-for-services/national-condom-distribution-service/ for further information.
  - Remove VAT on condoms.
- Sexual health messages:
  - Design mass media campaigns for target populations to promote positive sexual health behaviour change. These require political commitment.
  - Use social media, particularly with an interactive element, to positively change sexual health behaviour.
  - Provide health and education professionals with the knowledge and skills to deliver opportunistic sexual health messages.
  - Important sexual health messages need to be positively framed and to remain personal, pertinent and readily available.
  - STI messages can include:
    - Always using a condom, correctly and consistently, particularly when having sex with new or casual sexual partners.
    - Avoiding overlapping sexual relationships and reducing the number of sexual partners.
    - Have regular sexual health testing; by normalising testing and making it more widely available, those with STIs can be promptly treated so reducing the pool of infection.
    - Where to access services and supports.
  - Sexual health messages need to be targeted at specific groups to take account of different types of sexual relationships and behaviours.