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HIV NURSING

CARING FOR PEOPLE AFFECTED BY HIV

Sexual health and its promotion

Editorial

Features

Plus Call for Papers 2012

Now listed in **EMBASE, CINAHL, EMNursing, Compendex, GEOBASE, Mosby Yearbooks, Scopus, Thomson Gale** *and* **Elsevier Bibliographic** *databases*

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Aims and Scope

HIV Nursing has been developed as a forum for those at the forefront of caring for people affected by HIV. The journal is supported by a highly respected Editorial Board drawn from a wide range of nursing specialties. This is further strengthened by an Advisory Panel who will be making regular contributions to the journal.

HIV Nursing is intended to provide a medium for communication on issues relating to HIV care, which will be run by the care professionals for those involved in the day-to-day matters affecting the lives of patients.

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Sexual health promotion in a changing world

Juliet Bennett

Independent Nurse Advisor

Welcome to the fourth and final edition of *HIV Nursing* for this year. This edition focuses, by popular demand, on issues relating to sexual health and sexual health promotion.

Research in the field of sexual health continues to alert us to new challenges and generates yet more unanswered questions! Very recently our attention has been drawn to new data suggesting that women using hormonal contraceptives, in particular injectables, may be at twice the risk both of acquiring and of passing on HIV [1]. So now we must consider how this may affect women's contraceptive choices and the implications for family planning policy and advice.

Of course, when reviewing the risks of acquiring or transmitting HIV by women *per se*, we must also see the broader picture relating to both mother and baby: not only is the use of contraception to prevent unwanted pregnancy significant in preserving women's health in various contexts; but it is also an important component in strategies aimed at reducing mother-to-child HIV transmission. The World Health Organization (WHO) has scheduled an expert panel meeting in January 2012 to explore the potential need to revise its contraceptive guidance, particularly in parts of the world where HIV has a high prevalence. We are planning an edition for 2012 to focus on women's issues and hope to have more information on this topic by then.

For most of us health promotion is a significant part of our role. One useful resource which you may not yet have come across is the recently rebranded 'Making it Count' series of Briefing Sheets. These online PDF summaries [2] provide a short overview of the evidence on a range of important topics for sexual health promoters working with men who have sex with men (MSM).

In this issue of *HIV Nursing*, and highly relevant to sexual health promotion, Matthew Hodson gives a fascinating insight into the development and work of the organisation GMFA, demonstrating a considerable shift over the last two decades, in terms of approaches to gay men's health and HIV prevention work in particular. He writes openly about the organisation's philosophy, about their 'sex-positive approach' to HIV prevention, where he feels they have gone wrong (and where they have succeeded!), and the need to recognise and work with the huge diversity of people's sexual lives.

Jonathan Roberts and Gary Barker enlighten those of us who, like me perhaps, came into the field of HIV from an acute medical and infectious disease background, rather than a sexual health/GUM one, and feel relatively ignorant on the subject of partner notification (PN). They explore this measure in depth from a public health perspective and also look at the potential impact on the lives of the individuals concerned.

Jean-Pierre Limbardet's informative article explores the problem of sexual dysfunction, a condition I think many of us may feel ill-equipped to assess adequately in our patients. We hope that reading this will give you more confidence in facilitating discussion and referring on where appropriate.

In my contribution on the internet and sexual health, I have looked at the impact of new technologies on our sexual lives, both the positives and the drawbacks. In particular, I have tried to address the internet's potential as a means of sexual health promotion.

As always, we invite any of you who have strong views or experience on any of the issues raised in our articles to write to us – how about writing an article for us in 2012 too? In the New Year we will be setting up a 'writer's buddy' service for any of you who feel inexperienced in writing for publication and would like more support in doing so. If you have an alternative viewpoint, a personal perspective, or simply wish to echo or reflect on any of the articles that you read in *HIV Nursing*, please do get in touch.

Finally, on behalf of NHIVNA, I'd like to wish you all a very enjoyable Christmas and good fortune in 2012.

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Call for Papers

2012

HIV Nursing welcomes all research papers, case studies, audit reports, literature reviews, editorial letters and other contributions relevant to healthcare professionals working in HIV.

If you have recently completed a dissertation or degree, set up a project that has improved care for your patients, or conducted some research, please let us know.

One of the best ways to raise our profile as nurses is by demonstrating innovative work that improves the lives of patients, family and staff within the field of HIV care.

Whether you wish to contribute a full-length feature article (2,500 words) or a current issues / opinion piece (minimum 500 words), or send in a letter or comment, the Editorial Board of *HIV Nursing* will be pleased to hear from you.

Themes for 2012 include:

12.1 Psychosocial issues

12.2 Women and HIV

12.3 Patient participation

12.4 International perspectives

Need some help?

If you feel you have a contribution to make to *HIV Nursing*, but are unsure how to go about it, help is at hand from a member of the Editorial Board.

We are delighted to offer a 'writing buddy' service to guide both first-timers and old hands through any aspects of the writing process that may present difficulties.

Please contact the Mediscript Editorial team in the first instance with a brief description of your proposed contribution, and your query will be forwarded to the person best qualified to support you.

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Please remember, not every item carried in *HIV Nursing* needs to match the issue theme – so do not be deterred if you have a contribution that is not within the themes mentioned above.

Older and wiser: 20 years of HIV prevention

Matthew Hodson

Head of Programmes, GMFA—the gay men's health charity, London, UK

Introduction

In 1992, Gay Men Fighting AIDS (GMFA) was founded by a group of gay men, many already working in HIV prevention or treatment, who were frustrated by the lack of specifically targeted HIV prevention resources for gay men. Then, as now, gay men were the group most likely to become infected with HIV in the UK. As a recent HPA report stated, 'MSM have remained the group most disproportionately affected by and at risk of HIV infection through the three decades' [1]. Back in 1992 there was a woeful lack of resources that spoke frankly about gay sex as we experienced it, or that described sex in the language we would use in day-to-day conversation or sexual negotiation.

So much has changed since that time. This was, of course, in the days before effective combination therapy. The outlook for anyone diagnosed as HIV positive was bleak. It was also a time of much greater repression, both legal and social, of the gay community. Section 28 [2], which prohibited 'the intentional promotion of homosexuality' by any local authority and 'the teaching in any maintained school of the acceptability of homosexuality as a pretended family relationship', had only recently been passed, coming onto the statute books in 1988. The age of sexual consent at this time was 21 for gay men – and a Parliamentary debate 2 years later only reduced this to 18, endorsing and enshrining that legal inequality. Gays could not serve in the Army, adopt or enter into civilly recognised relationships.

Government campaigns

Homosexuality, or any specific sexual act for that matter, had not been referred to in the famous Iceberg and Tombstone HIV billboard campaign that Margaret Thatcher's government had put out in response to the threat of AIDS. A famous Health Education Authority (HEA) campaign told us that 'AIDS can affect anyone', but scanning the huge group photo, which encompassed people of all ages and ethnicities, I struggled to see a single face that I would have identified as a gay man. Later campaigns acknowledged gays, but in ways that were so coy as to be frustrating. 'They don't have safer sex just because it's safer' proclaimed one such campaign, prompting my then teenage self to wonder why they did have safer sex, and whether there was some reservoir of sexual delight that I had not yet happened upon.

A new ethos

When GMFA came along there was a radical change. The ethos was that gay sex, in all of its variety, could be celebrated. Gay shame and internalised homophobia were not helpful to the cause of HIV prevention. If gay men were told that

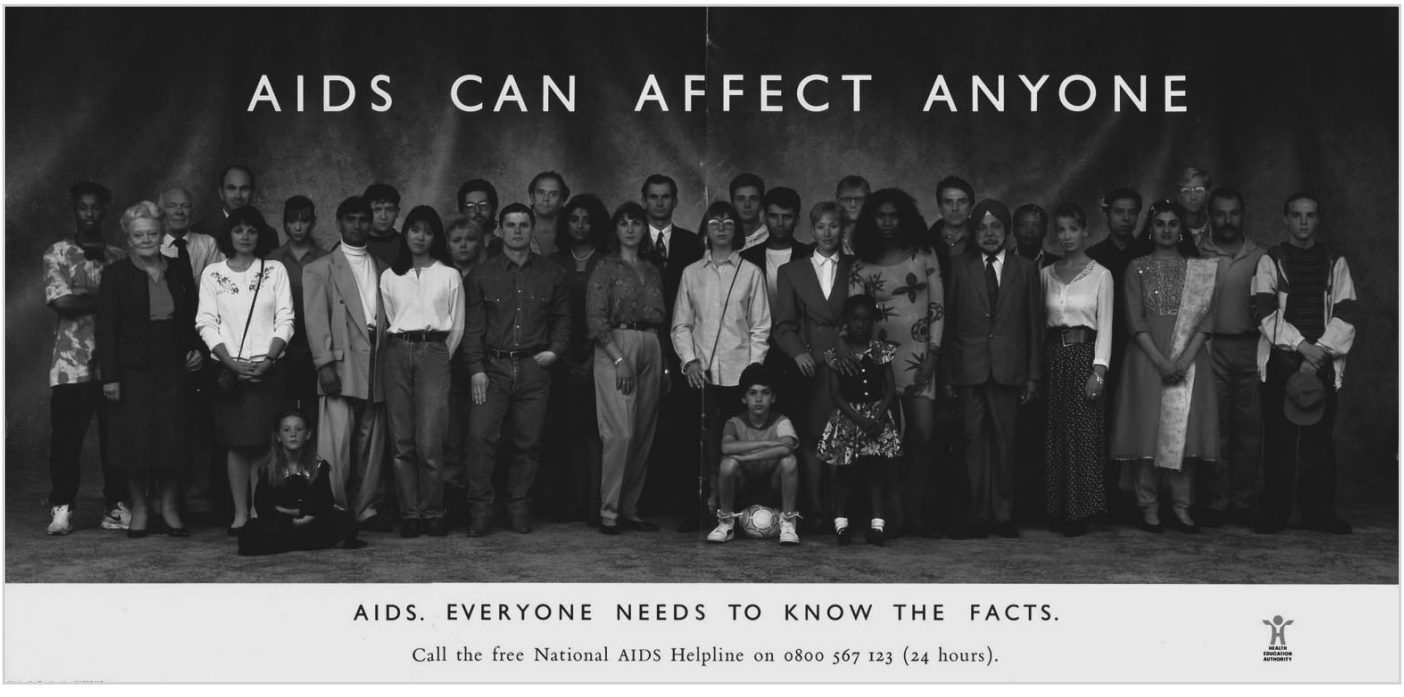

Figure 1: *An early HEA campaign poster.* [Crown copyright 1992 (image 195). Reproduced under the Open Government Licence (see: www.nationalarchives.gov.uk/open-government-licence/open-government-licence/htm)].

they were inherently wrong, because of their sexual desires, or even that their sexual preference itself was a form of illness, then how could we persuade these men to adopt healthier lifestyles? Instead GMFA preached that our sex was good, and that we had the power and resources to make it even better. Our earliest intervention was called 'A Day of Sex', a workshop where gay men were given information about HIV and safer sexual practices within a very sex-positive context. All consensual gay sexual activity was dealt with in a non-judgemental manner. We encouraged participants to become safer sex advocates in their own lives, adopting a 'shag one, nag one' approach. We had an overly ambitious vision of creating a safer sex army out of London's diverse and fragmented gay communities.

Equality in law

A lot has changed since GMFA's early days. In the broader political landscape, most of the legislation that discriminated against homosexuality, or allowed discrimination to take place, has been repealed or amended. The lesbian, gay and bisexual communities probably enjoy greater legal protection in the UK now than at any other time in their history. Support for gay equality no longer falls along party lines. The Prime Minister, in a recent address to the Conservative party conference stated, 'I don't support gay marriage despite being a Conservative. I support gay marriage because I'm a Conservative.' [3].

Improved treatment

The most dramatic changes in the HIV environment, however, have been advances in the medical treatment of HIV. The treatments that we have may still be unpleasant and inconvenient but, as dosing regimens are refined, they are becoming increasingly easy to take and to tolerate. People in this country are still dying as a result of HIV infection, but not at anything like the rate that they once were [4], and death is now likely to be linked to late diagnosis or co-infection or to non-AIDS-defining conditions ['a total of 516 people (362 men and 154 women) infected with HIV were reported to have died in 2009, 73% of whom had been diagnosed late.' [5)]. If this has resulted in fewer gay men being scared of HIV, then this is the prevention environment that organisations such as GMFA have to work in. AIDS simply isn't as scary as it once was.

As a gay man who was on the scene in the 1980s, I did not need HIV prevention campaigns to tell me that HIV was frightening – I observed it in the faces of men whose cheeks had hollowed, or in those acquaintances who vanished from our lives as the disease, which many felt unable to disclose, took its toll, or in the high number of funerals of friends that I attended whilst still in my early twenties. In the modern era of effective treatment, HIV prevention work needs to chart a narrow path, being honest about the realities of living with HIV, which are very different now to the realities of two decades ago.

A targeted approach

Something we learned early on was that we could not expect all gay men to be as exercised about HIV prevention as those founding members of GMFA were. The provision of information is part of a transaction that we have with our target audience, and sometimes we need to sweeten that exchange by providing content that is more desired by the target audience than simply the prevention information we are tasked to deliver. It's a cliché to say that "sex sells", but this is borne out again and again in evaluations of HIV prevention that look at, for example, the penetration of mass media campaigns. Workshops such as 'The Sex Course', or even 'The Arse Class', and booklets such as 'The Gay Men's Guide to Better Sex' – or even just a fairly saucy picture on an advertising campaign – all enable us to reach greater numbers of gay men and to provide sexual health information within a relevant context.

As the environment has changed, so has our work. GMFA still has a reputation for being a sex-positive organisation. Much of our work specifically targets men with high numbers of sexual partners, as the group most likely to acquire STIs or HIV. Recently, however, we have focused on supporting gay men within relationships, both recognising the potential benefits of partner reduction in HIV prevention and the fact that, when in a relationship, many men will adopt different strategies to prevent HIV transmission than they might with casual partners. We strive to recognise the diversity in the ways that gay men organise their relationships and their sex lives, and to provide information that is pertinent to the monogamous gay couple as well as to the man who may have several partners each week.

Realistic advice

Condom use remains at the heart of our prevention activity. For some men consistent condom use poses no problems. However, for most men that I hear from, gay or straight, condom use means that sensitivity, spontaneity and intimacy are all reduced. As a result, many men try to negotiate sexual strategies that do not involve condoms, whether that is in the context of a long-term committed loving relationship or a night of wild sexual abandon. We recognise that the gay men who make up our target audience are adults, perfectly capable of making, and entitled to make, decisions about their own health. Although we encourage condom use, we also discuss other strategies that do not rely on condoms. We recognise the weakness of many harm-reduction strategies, but consider it our role to provide men

who seek such information with accurate and realistic advice.

When condoms were first adopted as the main line of defence against HIV, it was probably not imagined that 25 years later they would still be at the core of HIV prevention. Condoms were a short-term strategy. Unfortunately, it is only recently that we have started to see significant progress in other prevention technologies. Post-exposure prophylaxis is clearly not a substitute for condom use. Pre-exposure prophylaxis may be in time, but recent trials show high levels of non-compliance (although with encouraging preventative results for those who were successful in their adherence).

Our target audience does not live in a vacuum. Many gay men, in particular HIV-positive men, will have heard of the 'Swiss Statement' [6] and will wonder about the actual risk of transmission that they present when their viral load is undetectable. At the same time, we receive emails from gay men terrified that their one sexual encounter, being the insertive partner in oral sex, may have led to their infection. It is frequently a challenge to provide information, often in non-interactive media such as advertising campaigns or booklets, that will be able to inform both these groups, and motivate all gay men to maximise their sexual safety.

New technologies

We have also changed as a result of technological innovations. Since GMFA's founding, the internet and, more recently, the proliferation of dating apps on handheld devices, has revolutionised the way that gay men meet each other for sex. Increasingly, HIV prevention interventions are moving out of the bars and cruising grounds and into the online community. GMFA's sexual health information site [7], which has Health on the Net accreditation, now receives in excess of 100,000 visitors each quarter. GMFA was one of the first UK-based HIV prevention agencies to explore the use of social networking sites.

Our current campaign, 'Count Me In', encourages gay men to get personally involved in preventing HIV transmission within the gay community by signing up to five simple HIV prevention actions [8]. Initially, there were no significant funds to promote this campaign so we rolled it out largely via social media, encouraging people to sign up to a Facebook 'cause' page and contribute video footage of themselves talking about why the campaign was important to them. Increasingly, the trend is to make our work as interactive as possible, to engage our target audience through dialogue and response. I think we are just starting to scratch the surface of ways in which we will use social media in future.

With the benefits of early medical intervention for people with HIV now established – coinciding neatly with our desire for a reduction in the population-level viral load – at GMFA we have strengthened our resolve to encourage men to test for HIV and other STIs. We are currently piloting an online partner notification service, whereby gay men who have been diagnosed with an STI can notify their recent sexual partners by an anonymous (if they so choose) text message, email or even a message via a gay dating website. This project, funded by the Elton John AIDS Foundation and supported by most of the major gay dating websites, aims to achieve earlier diagnosis and earlier treatment, which could significantly impact on HIV viral load and, thereby, on new transmissions.

Learning from experience

GMPA campaign poster

I couldn't claim that GMFA's work has always been perfect (I would also say the same about the work of every other HIV prevention provider). Inevitably, I look back at some of our earlier work and think only of how I would do it differently now, if I had the opportunity. However, we take great pains to learn from our experience, and from the experience of other similar organisations around the world. Our task is not made any easier by near-constant uncertainty over our funding. Prevention outcomes are hard to demonstrate and commissioners are under constant pressure to establish cost-effectiveness. Within that context it is worth bearing in mind that national prevention programmes accounted for less than 0.5% of the £762m spent on treatment and care in England in 2011/12 [9]. The Health Protection Agency recently indicated that each infection prevented would save between £280,000 and £360,000 [10]. With figures like that, we only have to prevent (or even delay) a couple of seroconversions each year for our work to be cost effective.

Looking forward

I would say that we have been largely successful in communicating to gay men how HIV is and is not transmitted. We need to ensure that all gay men are continually provided with up-to-date information and that young gay men or those new to the scene can access our work. We must continue to explore new ways of communicating with gay men and be prepared to learn from both successes and failures. We must live with the knowledge that there is no magic bullet, no formula of fear or entreaty that will be able to prevent all future infections. This is our daily challenge but one which I hope we will continue to face with cautious optimism, commitment and resolve.

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Partner notification and HIV: a data review

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Introduction

Partner notification (PN), or contact tracing (CT), has been employed by UK healthcare professionals (HCPs) as a public health intervention since the 1940s. Its practice is somewhat more refined now but essentially it remains the same process: the identification of sexual or injecting drug-using partners (contacts) of those diagnosed with a sexually transmitted infection (STI), including human immunodeficiency virus (HIV), informing them that they might have been at risk of infection, and offering screening for that infection, treatment if appropriate and support [1].

Its importance as an intervention for identifying undiagnosed infections was highlighted in the National Strategy for Sexual Health and HIV [2]. HIV PN is more complex than other STI PN as it brings with it a plethora of issues, given the enormity of what can be perceived as a potentially life-threatening disease. It needs to be undertaken in an appropriate and sensitive manner, requiring refined communication and counselling skills of the HCP undertaking this process. The challenges can be multiple, with the potential of professional accountability and patient confidentiality clashing over ethical dilemmas. Issues around criminalisation in non-disclosure of HIV have also complicated this process [3]. Partner notification is voluntary in the UK and individuals do not have to engage in this activity.

Basic principles

There are three forms of PN:

- Patient referral is where the index patient is encouraged to inform partners about the potential of an infection.
- Provider referral is where the diagnosing or treating healthcare professional elicits information about partners, informs them of the risk via various methods and supports them in accessing testing services if required.
- Conditional referral, or contract referral, is a combination of the two (usually within a timeframe). There has been much debate over which form has better outcomes, discussed later [4–8].

HIV PN should be undertaken promptly following diagnosis, to prevent unknowing onward transmission and minimise the morbidity and mortality risks of late diagnosis [9]. However, other issues can reduce the success of disclosure – not only to sexual partners but also to family, friends and employers. These largely arise from the stigma associated with HIV and need to be borne in mind when undertaking HIV PN [10,11].

In 2010, 6658 new HIV infections were reported in the UK [12], confirming that this infection remains a key public health issue in the United Kingdom. Robust methods of HIV PN need to be in place to offer clients the support and opportunity to disclose to partners. This process appears to be inconsistent in the UK, with no targets in place for HIV, unlike STIs such as chlamydia and gonorrhoea [13].

Analysis of PN outcomes provides useful data on the efficacy of this public health intervention and examining sexual networks could yield information to inform appropriate health promotion strategies during epidemics. It also demonstrates that client motivation to engage in PN needs greater consideration.

Study data

Background

There is a lack of UK and European data in this area, with most available research around PN and HIV being US-based. Although this data is pertinent to the UK, there are some notable differences in process and approach. The USA Centers for Disease Control (CDC) now recommends that all persons with newly diagnosed HIV should be referred to Partner Counseling and Referral Services (PCRS) [14,15]. In the UK we use action and outcomes codes to define HIV PN and, although not entirely consistent nationwide, they are based on the outcome codes created for STIs such as syphilis, chlamydia and gonorrhoea.

In the USA disposition codes are used to separate the components of PCRS (notification, testing and test results), distinguishing between verified and unverified outcomes, but also differentiating between outcomes that occur before and after cases are received by PCRS. In the UK most HIV PN is undertaken by GUM clinics and not referred to a regional public health agency. Recurring themes across all studies are concerns about insufficient training, time and cost, the importance of collaborative working, the varying merits of different forms of PN, the barriers of stigma, violent responses to notification, emotional distress and relationship dissolution. However, many of the concerns can be offset by the benefits of prophylaxis – and overall, positive outcomes are frequently identified, with the caveat that there is

much room for improvement by collaborative working and careful tailoring of approach.

USA studies

1. A study exploring attitudes, experiences and practices regarding HIV PN, from both a client and a service provider perspective, offers insight into barriers that may exist. Two systematic reviews undertaken over 8 years ago, mostly on US data [16, 17] both demonstrated clients' willingness to participate in all forms of HIV PN and additionally stated that providers found HIV PN was a favourable intervention, with few negative aspects. Given these positive outcomes, the researchers recommended greater participation in this process, stressing the need to identify more effective techniques to improve HIV PN.
2. Another survey [18], of 7300 physicians working in areas where STIs were diagnosed, elicited their views on undertaking PN through a 17-point questionnaire. Analysis of the response indicated four main themes in the physicians' responses: perceived norms, infection control, patient relationships, and time and money. Multivariate analyses of these factors showed that physicians endorsed patient referral over provider referral, with 70.1% stating that patient referral complied with a good standard of care. There were concerns about the time they and their staff would spend on provider referral and low confidence in undertaking this form of PN, because of lack of training. The additional cost of provider referral was raised but the authors suggest this may be due the practicalities of undertaking this type of PN in the USA.

   The lack of training around PN causes staff to lack confidence in implementing it, but this did not prevent its value from being perceived. Time spent was also a concern – but can be offset against potential reductions in STI presentation, and thus time later saved. From a UK perspective, the drawback of this study is its perspective on cost issues because the data relates to doctors being involved in PN, whereas in the UK this tends to be the remit of the sexual health advisor (SHA) or nurse, which has different cost implications.
3. A recent study [19] evaluated both patient and provider referrals in 51 centres: 590 people diagnosed with HIV 6 months prior to the study identified 5091 partners for the 6 months preceding their HIV diagnosis, of whom only 1253 (24.6%) were contactable and not known to have HIV already. Of 439 clients, 332 (75.6%) reported notifying one or more partners, giving a partner total of 696 (55.5%), 84.1% via partner referral and 13.5% via provider referral. Of 439 clients, 208 (47.4%) notified all partners by patient referral only – but acknowledgement is made that many identifiable partners, who might benefit from being notified of potential exposure, are not contacted.
4. Finally, time is a central consideration when engaging in PN. A study looking at the determinants of time spent on PN in one rural and three urban centres, over a 14-day period, documented the total time spent with each client diagnosed or attending as a contact of an STI, along with type of infection, client type, demographic characteristics and client outcome. Of 2506 recorded hours, 429 hours were spent on PN activities with 1148 clients and significantly more time was spent with contacts of the index patient, especially when contacts of HIV infection. This acknowledges the labour-intensive nature of PN, and HIV PN in particular [20].
5. Looking at predictors, another study identified two significant predictors of informing past sexual partners as, firstly, a previous history of having an STI and, secondly, being HIV infected [21]. It was noted that disclosure in high-risk groups is being undertaken, but the need for counselling to be a part of the process was reiterated.

European studies

1. A retrospective UK-based case note review using a local pregnancy database [5] identified 145 HIV-positive women within a 2-year period, of whom 19% had not disclosed their HIV status to partners, and 18% had no record of PN discussion. The possibility of potential violence around disclosure may be a reason and thus care plans and notes should include suggestions for clear documentation of intimate violence and other social issues, as well as the PN discussion itself.
2. A study in Denmark [22] looked at 254 consecutive newly diagnosed HIV-positive people over a year and found that only 123 were offered PN. Where PN was initiated, the number of partners identified per patient averaged 2.4, with 1.4 partners being traced and 0.28 new HIV-positives identified – indicating the benefits of this endeavour.
3. A UK review of 471 HIV-positive patient notes [23] found that PN was discussed with 353 (75%) of the patients but only undertaken with fewer than half – 197 (42%). The most common reason given for not raising the issue was that patients were emotionally distressed or unwell, and PN was deferred at this point and not subsequently followed up. A proportion transferred care to different centres and were lost to follow-up (22%), while 70 patients named 158 at-risk sexual contacts of whom 71 were notified, with 28 seen in participating clinics and 5 testing positive to HIV (18%).

   PN was most effective with regular partners (all those who tested HIV positive were regular

partners). The study concluded that, despite some proven success with PN, it was rarely carried out and effective local policies were needed. This study pre-dates Highly Active Antiretroviral Therapy (HAART) – and today issues of PN avoidance by HCPs, due to the inevitable morbidity and mortality of this client group, no longer exist. However, with longevity of clients and the potentially greater sexual exposure that accompanies it, the prospect of onward transmission remains as significant as ever, and renewed efforts are needed to encourage HCPs to engage in this process and address the sexual health needs of this client group.

4. An investigation of an HIV transmission cluster in South Wales [24] identified 123 individuals. Amongst these people, 104 provider referrals were undertaken, 57 (54.8%) of whom were successfully contacted, with known outcomes. Methods of PN exposed a network of young, well educated individuals repeatedly risk taking, despite awareness and knowledge of HIV. Of those tested for HIV via PN, a previous history of gonorrhoea in the newly diagnosed HIV-positive group was noted, compared to the negative group (P=0.0010), indicating previous high-risk sexual behaviour as a precursor of HIV acquisition. This demonstrates how collaborative working can yield good outcomes for PN and that provider referral has a significant place in this procedure.

Relationship outcomes after PN

Given the qualitative nature of partner notification, two or more consultations are often involved, incorporating various aspects of psychological, physical or social support. An important concern is that HIV PN outcome could be compromised because the process itself can have negative effects on sexual behaviour and relationship stability.

A longitudinal study [10] compared recorded partner information of people newly diagnosed with HIV and syphilis at baseline and then at 3 and 6 months [157 index cases (76 HIV infections and 81 syphilis) reporting 220 partnerships (94 HIV and 126 syphilis)]. Partnerships were eligible if at least one partner had been identified during PN. Partnership dissolution and acquisition trends were recorded along with reported sexual abstinence, condom use, emotional abuse and physical violence – and compared between groups. The PN process was completed for only 32.7% of partnerships. After PN, 46.8% of partnerships dissolved, 15.9% of cases acquired a new partner, and emotional abuse and physical violence decreased significantly. There was no difference post PN between groups for partnership dissolution, physical violence, emotional abuse and abstention from sex, with the conclusion that HIV PN did not appear to cause greater partnership dissolution, new partner acquisition, or violence compared with syphilis PN.

These outcomes are further supported by the 2003 study [11] looking only at HIV-positive clients interviewed for PN and partners notified, stating that partnerships where both persons received PN were less likely to break up or acquire new partners and more likely to be using condoms at follow-up.

New approaches

New methods of HIV PN could prove beneficial in detecting HIV infection. A study was undertaken of the acceptability and perceived utility of internet-based PN targeted at MSM exposed to STIs [25]. There appeared to be a broad acceptance of this scheme, regardless of HIV status, welcoming the proposal of PN-related email correspondence. However, this method of HIV PN should be used with caution because immediate support and HIV testing needs to be readily accessible.

Innovative programmes are needed to support both patient and healthcare providers in initiating HIV PN. The first online STI partner notification system, inSPOT, was developed in the USA by Internet Sexuality Information Services (ISIS) using electronic postcards to reach the MSM client group. In 2006 and 2007 23,594 e-cards were sent, of which 2736 (11.6%) were HIV related. This type of intervention, along with internet sites and email, provides an opportunity to target a previously inaccessible contact of HIV. An online PN pilot study co-ordinated by Gay Men Fighting Aids (GMFA) is currently under way in eight UK GUM clinics, although this HIV PN method is not currently in use in the UK [26].

Conclusion

PN can be used as a tool for detecting HIV but its reliability is variable. The nature of the process requires it to be tailored to the individual in an appropriate environment and within a given timeframe. Research from the USA highlights the need for innovative approaches with different client groups and demonstrates that as HCPs we should not be afraid of tackling this contentious issue. More documentation of findings and outcomes of HIV PN is needed to establish its efficacy as a public health intervention. Some literature, as discussed earlier [18], has reservations about provider referral, given its limited effectiveness and encroachment on the HCP's time. Looking at the beneficial outcomes that PN can have, however, highlights the importance of tailoring techniques to suit different individuals and clinical contexts.

Given the limited literature from a UK perspective, it is evident that further research is essential around HIV PN, looking at the most effective approaches and additionally gathering qualitative data about how people diagnosed with HIV feel about

engaging with this issue. PN needs to be embedded firmly within initial or follow-up consultations of the newly diagnosed. HCPs undertaking this activity must approach the process in a sensitive manner, explaining the rationale for the enquiry. Support from colleagues working with HIV-positive people should be considered, and the two-way nature of the process should be appreciated in the best interests of the patient. Recent efforts by HPA and NAT have pushed this issue up the healthcare agenda, providing a platform for further discussions with professional associations involved in the care of those infected with and affected by HIV.

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Partner notification and HIV: a case study

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Introduction and background

This article outlines the essentials of partner notification and reviews outcome for one individual following a positive diagnosis, using a case study that demonstrates these principles in action.

The aim of partner notification (PN) is to identify and treat asymptomatic or incubating infection in the contacts of diagnosed cases, so that the average duration of infection is reduced and chains of transmission are broken. Effective and timely partner notification is therefore essential to prevent transmission and late diagnosis of HIV. Modern partner notification methods were introduced in Europe in the 1930s to help control syphilis. The original model for tracing the contacts of syphilis cases involved field workers, known as medical social workers or health visitors, who would go into the community to find contacts [1]. This is what we now call provider referral.

Under the 1946 Tyneside scheme, one of the UK's first organised contact tracing systems, contacts of patients with syphilis or gonorrhoea were persuaded to attend a clinic by a health visitor. By 1970, contacts were attending following the efforts of the patients themselves [2].

Traditional methods

Partner notification uses three methods:

- *Patient referral* involves the index patient contacting their sexual partner/s in person. With HIV this can be difficult when the index patient does not wish their partner/s to know their HIV status.
- *Provider referral* involves the healthcare worker contacting sexual partner/s on the index patient's behalf (as the health visitors or medical social workers in the 1930s). This method can protect the patient's identity and allow the healthcare professional to follow up the contacts' attendance more effectively.
- *Contract referral* is a combination of these two methods. When an index patient fails to notify a contact within a given time, the healthcare professional will initiate a provider referral. Setting timeframes with patients can be useful in this context, because patients will often tell us what we want to hear and say they will inform partners. However, a contract referral gives the patient control initially to tell partners, knowing that the healthcare provider will act if they do not.

A patient in the UK with a new HIV result therefore has four options: tell their contacts themselves, have the healthcare practitioner contact partners using provider referral, opt for contract referral – or do nothing, as partner notification is not mandatory. Although doing nothing is not in the best interest of the contacts, this may be what the patient decides and should be respected.

Online methods

In recent years online partner notification services have been developed to assist the patient and healthcare practitioner. Several studies have shown higher rates of risky, anonymous internet sex with men who have sex with men (MSM), one study showing 65% of MSM having anonymous internet sex [3].

GMFA (Gay Men Fighting AIDS) are currently piloting a UK online partner notification tool for men who have sex with men (full article on page 3). This will enable patients to contact partners through anonymous text, email or message through online dating sites. The use of online partner notification in other countries has shown that this method can significantly reduce transmission rates of HIV and other STIs. Studies suggest that internet partner notification programmes would be highly acceptable to MSM who use the internet to meet sexual partners [4].

Staff skills

Partner notification should be carried out by a sexual health advisor or other professional experienced in partner notification techniques. Because the process is voluntary, its success requires the patient to co-operate – therefore the healthcare professional may need to spend time working with the index patient. Partner notification is often done shortly after a new diagnosis, when the patient is still coming to terms with their status and may want to blame previous partners. During this time the patient may not be receptive to partner notification and it may need to be deferred until the patient is ready.

Case study: Paul

Background

Paul is a 31-year-old gay man who is well known in the gay community. He was seen in clinic as a result of a provider referral (Andy). His point-of-care and confirmation test were positive.

Andy was diagnosed HIV positive but had had a negative HIV test 3 months previously. Paul was his only contact since his negative test and there were no other partners in the window period of this first test.

Issues and problems

Paul's last negative HIV test had been 6 years earlier, and he had had one other long-term partner since this test. Paul declined to give details initially for fear of this former partner finding out his status.

He was seen on a regular basis by the health advisors who discussed the different options for partner notification. Paul agreed that his ex-partner should be contacted for a provider referral and gave details, which were documented in his notes. Shortly after leaving the clinic, Paul changed his mind and phoned the health advisor to withdraw consent to contact the ex-partner. This is a common reaction during the time of a new diagnosis, when patients are coming to terms with their result, and we agreed to postpone the provider referral. When revisiting this a month later, Paul said he did not ever want the provider referral to happen.

This was discussed within the team and it was felt that there was a high risk of the ex-partner being HIV positive for the following reasons:

1. Paul had a negative test 6 years earlier and had only had two partners since.
2. One of the partners was recently diagnosed positive (Andy), whereas a test in this clinic 12 weeks earlier had been negative.
3. Paul remembers a seroconversion-type illness during his relationship with the ex-partner, although this cannot be proven.

The options discussed by the team were: either carry out an anonymous provider referral against Paul's wishes and without his consent (which might be a concern for him); or continue working with him in the hope that he would agree and the referral could proceed with his permission.

It was difficult for the health advisors to work with Paul as every time he came into clinic he was always too busy to wait – he would have his blood test, collect medication and then leave. The health advisors therefore started to take Paul's bloods so there was time to talk to him then. The health advisors would address the fears that Paul had about his contact identifying him and suggest ways of minimising this risk by using the support of other clinics to initiate the provider referral. We also looked at the negative impacts of not informing the contact, such as onward transmission to others and late diagnosis of his ex-partner. We noticed that Paul was not referring to his ex-partner by name, as though disassociating from him. The Manual for Sexual Health Advisers, published by the Society of Sexual Health Advisers (SSHA) [5] gives advice on managing resistance to partner notification and for this specific situation suggests building a sense of familiarity and making the person as real as possible, moving from superficial details (age, appearance), to circumstances and personality.

Paul was seen by a health advisor a few months on and disclosed that he had a new partner who was also unaware of his status; he had been in a relationship for 6 months and using condoms all the time.

Team decision and outcome

It was decided by the team not to go any further with the initial provider referral. It had been noticed that, when the provider referral was discussed, Paul would start to miss appointments – and the team were concerned he might stop attending altogether if pushed too much. As Paul had recently started ART and had a low CD4 count (<200 cells per ml), our priority was to maintain adherence to treatment and improve his CD4 cell count; pressuring him over partner notification could have an effect on this.

A while later, Paul started asking the health advisors for advice on disclosure and was working towards telling his current partner. After a few weeks a contract referral for his previous partner was agreed. Had provider referral been required as part of this process, we would have been able to involve other clinics to help (provider referral can be problematic when the contact is in a new relationship).

Paul attended clinic recently with his partner and disclosed with the support of the health advisor. His partner tested negative. This led us to raise the issue of his previous partner again, but Paul then confirmed that he did not, after all, want any form of referral to take place.

Discussion points

If the ex-partner is (by inference) HIV positive, he could be undiagnosed and unknowingly infecting others. Although this was discussed at length, the team agreed that, if the ex-partner was having unprotected sex, he had a responsibility to himself to test. Given Paul's reluctance for his ex-partner to be contacted, an anonymous provider referral without his consent would have addressed this issue.

However, if the clinic team goes against the patient's wishes, this can have a negative impact on the patient's care when the patient is informed. We had noticed that Paul's attendance dropped when partner notification was raised – and our primary responsibility is always to the patient.

Whilst this case study looked at long-term partners, we know that HIV-positive patients also have casual partners. Does a health visitor have a right to contact casual partners as well, if we know about them? If the patient reports using condoms all the time, is this any different to an HIV-positive patient reporting a one-night stand and not disclosing to them.

Conclusion

This one case study demonstrates the complexity of partner notification in HIV. There is no right answer or best option, as each case is individual and different clinics will arrive at different outcomes. All options should be reviewed with the patient, who should decide which method best suits their circumstances, and it is equally important to involve all members of the team in discussions.

If the patient declines notification, their wishes should be respected. Patients receiving a new HIV-positive diagnosis need time to adjust and deal with the initial shock and fear. The best results are achieved by experienced staff building up a relationship with the patient. This is often a long process that cannot be rushed. Informing the patient of the advantages, and addressing any concerns, will allow them to make an informed decision – which ultimately we have to respect.

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Sexual dysfunction: presentation and support

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Introduction

For most men and women, sex is an important part of adult life and relationships, and sexual difficulties are commonly reported in patients with HIV. For this reason the assessment of sexual dysfunction should be integrated into the psychological care process of HIV-positive men and women.

In the UK HIV-positive men who have sex with men (MSM) are five times more likely to report sexual problems than HIV-negative MSM [1]. This article, written primarily from a clinical perspective, provides insights into two common sexual dysfunctions in men: libido problems and erectile dysfunction. Equally, as women are rarely given the opportunity to discuss sexual dysfunction in HIV clinics [1], the second part of the article looks at the female sexual response in the context of gender differences, to help nurses make an informed assessment of female dysfunction.

The sexual response

The human sexual response has been defined as a three-stage cycle: Desire; Arousal; Orgasm [2].

Sexual dysfunction can affect any of the three stages of the cycle and is defined as a persistent or recurrent sexual problem of more than 6 months' duration. To make a comprehensive assessment, we need to understand both the causes and the clinical presentation of these problems (Panels 1 and 2).

Male sexual dysfunction

Libido problems

Libido problems relate to sex drive and include sexual desire disorders and sex addiction. It is important to distinguish between sex drive and sexual desire. Sex drive is a biological function triggered by testosterone in men and women. It can be compared to an appetite which motivates someone to have sex with a partner or seek a self-pleasuring experience. A gradual decline in sex drive is expected in the second part of adult life, as reducing testosterone levels accompany the ageing process. Sexual desire refers to sexual attraction and compatibility. In long-term relationships sexual desire is expected to change over time because sex becomes routine, predictable, perceived as ordinary – and the ageing process can affect partners' desirability.

Low sex drive can be organic, whereas low sexual desire is psychogenic. Low sex drive should be medically investigated to establish whether its cause is testosterone deficiency. There is increased evidence that testosterone deficiency, or hypogonadism, is more common in HIV-positive men, particularly those on highly active antiretroviral therapy (HAART) with raised estradiol levels [1]. When hypogonadism is diagnosed, androgen therapy is indicated. However, hormone therapy should not be initiated unless testosterone deficiency has been clearly established following referral to an endocrinologist. The normal serum testosterone range in men is 10–30 nmol. An early morning blood specimen is recommended to measure testosterone levels as its production is cyclic. Testosterone levels rise at night, peak in the morning and decline around midday.

There is no need to medically investigate low sexual desire, as sexual attraction and compatibility are not associated with sex hormones but with personal preferences. The problem of low sexual desire needs to be examined psychologically by exploring how the relationship

Panel 1: Causes of sexual dysfunction

- *Organic:* cardiovascular, neurological, hormonal, side effects of medications, childbirth, surgery, the ageing process, advanced HIV. A sexual problem with a gradual onset suggests an organic cause.
- *Psychogenic:* performance anxiety, unrealistic expectations about sex, depression, loss, bereavement, low self-confidence, negative self-image, relationship problems, traumatic experiences, fear of HIV transmission. A sexual problem with a sudden onset suggests a psychogenic cause.
- *Mixed:* a combination of organic and psychogenic causes.

Panel 2: Clinical presentation of sexual dysfunction

- *Primary:* the sexual problem appeared at the first sexual experience with a partner and has persisted ever since.
- *Secondary*: the sex life started as a positive experience with a satisfying sexual function; at some stage a sexual problem appeared and has persisted since then.
- *Situational:* the sexual problem has an erratic presentation or arises in some sexual contexts but not in others, e.g., a problem specific to casual sexual situations.

functions and involving the partner in a couple counselling setting. Discrepant sexual interests arise in all types of relationships, with the potential to cause tension and distress.

Patients newly diagnosed with HIV often respond with a grief reaction characterised by a depressed mood [1], health anxiety, concerns about social isolation or the consequences of the HIV status on their sexuality, current and future relationships. The grief reaction can last up to a year, during which a low sex drive is often part of the adjustment to an HIV diagnosis.

Sex addiction

Sex addiction is defined as the loss of control over specific sexual behaviours, with adverse consequences. Sex addiction has been characterised as the 'addictive cycle' [3], a four-stage process starting with preoccupation, followed by ritualisation and sexual compulsivity, and ending in emotional lows:

1. Preoccupation – thinking obsessively about sex.
2. Ritualisation – the implementation of a habit or routine in the pursuit of sex.
3. Sexual compulsivity – associated with risk-taking or danger, often impulsive.
4. Despair – guilt, shame and self-loathing are the emotional lows of sex addiction.

Healthy sex is usually followed by satisfaction. In sex addiction, satisfaction is replaced with negative feelings.

Sex addiction in the MSM community has been a source of growing concern since the widespread availability of internet-based dating, sexual networking and mobile phone applications such as Grindr, which promote instant sexual gratification. It is a mood-altering behaviour: sex addicts resort to using sex in the way that others may use substances or alcohol to regulate mood and emotions, when facing stress, loneliness or boredom.

Two particularly harmful aspects of sex addiction relate to health and relationship consequences. Sex addiction increases the risk of acquiring STIs, HIV and hepatitis C through unprotected sexual exposures with multiple partners. The impact on relationships can be devastating, leaving partners hurt, angry and betrayed. Sex addiction will soon be included in the American Psychiatric Association's *Diagnostic and Statistic Manual of Mental Health Disorders* (DSM-V), due for publication in 2012 [4].

Erectile dysfunction (ED)

Organic ED

Arousal is a complex vascular, neurological, hormonal and psychological process. Sexual desire associated with sexual stimulation trigger the arousal process by increasing the blood flow to the two corpora cavernosa of the penis, under the influence of the parasympathetic autonomic nervous system.

Erectile dysfunction is defined as the inability to achieve or maintain an erection sufficient for satisfactory sexual activity [5]. It is a common problem thought to affect at least 10% (2.3 million) of the adult male population in the UK [6]. The assessment establishes whether the sexual problem affects self-stimulated, nocturnal or early morning erections and sex with partners. Organic causes can account for problems in all three types of erections, as well as sex with partners. However, erectile dysfunction also has various non-organic causes and careful medical history-taking is needed to establish whether one or more factors are involved (Panel 3).

Psychogenic ED

A psychogenic cause for ED is seen mainly in the context of sex with partners. Where self-stimulated, nocturnal or early morning erections remain satisfactory, this strongly suggests a psychogenic cause, such as a significant life event.

The main cause of ED in young men is unrealistic sexual expectations [7]. Those with perfectionist personality traits feature high masculine ideals that are not realistically achievable (the sex machine model). They tend to understand the male sexual response as an automated process. This cognitive sexual distortion invariably creates sexual performance anxiety and a deep sense of inadequacy, causing ED. Deconstructing the masculine ideals helps the cognitive restructuring. Those men benefit from identifying their requirements to enjoy sex or the conditions they need to meet to feel satisfied about sex. That process helps them look at sex more realistically as a complex response – not under voluntary control – which at times, inevitably, will not go as they wish. The cognitive restructuring promotes a changed perception of the sexual response and thus de-dramatises the sexual problem.

For men on highly active antiretroviral therapy (HAART), the psychological effects of lipodystrophy can be devastating. The fear of being identified as HIV positive can affect sexual functioning, self-image and self-confidence [1].

Situational ED

ED in young men relates mostly to penetration and condom use. Erections may be satisfactory in non-penetrative sex, a less pressurising sexual situation.

ED treatment

Psychosexual support

A psychosexual assessment may be offered during the initial consultation in the sexual dysfunction

Panel 3: Medical history components for erectile dysfunction

- *Cardiovascular:* Hypertension, peripheral vascular disease, coronary heart disease, cerebrovascular accident, hypercholesterolaemia. The clinical presentation of ED is viewed as a cardiovascular event and a predictor of coronary heart disease within 3 to 5 years [5].
- *Endocrine:* Diabetes type 1 and type 2, hypogonadism, hyperprolactinemia, thyroid disease.
- *Neurological:* Autonomic neuropathy, multiple sclerosis, spinal injury, brain injury.
- *Surgical:* Prostate surgery, major abdominal surgery, radical pelvic surgery.
- *Penile abnormalities:* Peyronie's disease, phimosis.
- *HIV therapy side effects:* Neuropathies, lipodystrophy and atrophy.
- *Medication side effects:* Cardiovascular, psychotropic drugs, antiretroviral therapy. Thiazides, beta blockers, antidepressants and antipsychotic drugs are particularly implicated.
- *Lifestyle:* Smoking, alcohol and substance misuse, anabolic steroids, obesity and sleep apnoea.
- *Psychogenic:* Depression, anxiety disorders, unrealistic expectations, relationship problems, traumatic life events.

clinic. Most men with ED are referred individually. When the assessment reveals some underlying relationship problems, couple counselling involving the partner may be suggested.

Pharmacotherapy

Pharmacotherapy provides an effective and generally safe means of restoring erectile function for the majority of patients. It may take up to eight doses for treatment to be effective.

Oral therapy

The phosphodiesterase type 5 inhibitors (PDE5 inhibitors) are drugs relaxing the smooth muscles lining the vessels supplying blood to the corpus cavernosum, the erectile tissue of the penis. Increasing the blood flow to the two corpora cavernosa causes the erection to become more rigid. Three PDE5 inhibitors are licensed for the treatment of ED:

- Sildenafil citrate (Viagra) has a 4–5 hour responsiveness duration.
- Tadalafil (Cialis) has a 36-hour responsiveness duration.
- Vardenafil (Levitra) has a 4–5 hour responsiveness duration.

Injection therapy

Injection therapy or intracavernosal injection should be only indicated for non-responders to oral therapy. Alprostadil (Caverject) is a vasodilator increasing the blood flow to the penis by relaxing the smooth muscles of the vascular structure of the corpus cavernosum. Patients should be instructed in self-injection techniques.

Female sexual dysfunction

Background

Women with HIV are rarely referred to dedicated sexual dysfunction clinics. The issue of female sexual dysfunction is rarely raised in HIV clinics. According to a UK survey, as few as 4% of HIV health professionals in the UK ever ask their HIV-positive female patients about sexual functioning [1]. The survey suggests that ignorance, lack of time and embarrassment are to blame.

Female desire

Gender differences need to be taken into account for the assessment and management of sexual problems. Women are sexually different from men: for example, women tend to be more flexible and adaptable in their sexual responsiveness. It has also been noted [8] that women are generally less sexually aware than men. Sex drive is significantly lower in young women than in young men. They think and fantasise less about sex than men [8]. They may not feel the need to masturbate or instigate sex as often as men do.

Furthermore, some women see initiating sex as being the role of the male. Often women feel more sexually motivated mid way through their menstrual cycle, and before or after periods [8], suggesting the influence of the hormonal cycle. It is not uncommon among single women for sex drive to become dormant between relationships and be reactivated on meeting a new partner. Generally, women need to feel loved or emotionally close to their partner, desired, respected and safe to enjoy sex. Low sexual desire in women is often associated with a negative state of mind [9] caused by relationship distress, a serodiscordant partnership, health concerns, family problems, loss, bereavement or depression. Like men, women tend to feel sexually unattractive in the adjustment phase following HIV diagnosis.

The following criteria are used to assess sex drive in men and women:

- The ability to have sexual thoughts and fantasies; and their frequency
- Frequency of masturbation
- Frequency of sex with partner
- Who initiates sex in the relationship

Female arousal

Female arousal follows the same complex biopsychological process as for men. It is

characterised by the vasocongestion of the genitalia and vaginal lubrication. In a sexual situation desire allows foreplay to take place with sexual stimulation, triggering the genital arousal. Female arousal problems are responsible for uncomfortable or painful sexual intercourse. The use of a water-based lubricant can help. The menopause affects vaginal lubrication. A topical oestrogen may be indicated for menopausal women with vaginal dryness.

Female orgasm

Men and women enjoy sex differently. Men tend to feel dissatisfied if a sexual exchange is not concluded by orgasm; whereas women take a broader view. Anorgasmic women are able to enjoy sex for feeling desired, emotionally connected and pleasing their partners.

Women's views or experience of orgasm are likely to be influenced by variable genetic predisposition, sociocultural factors, upbringing and personality [8]. Men with a poor understanding of female sexuality tend to pressure their partners towards a sexually stereotypical response.

The referral process

As a rule, patients presenting with a sexual problem may need space and time to decide whether they wish to be referred to a sexual dysfunction or psychosexual clinic.

Most sexual dysfunction and psychosexual clinics require referrals from GP or NHS specialists (see Panel 4 for contact details).

Panel 4: London-based and national clinic services

The main sexual dysfunction and psychosexual clinics in London are:

- The Caldecot Centre at King's College Hospital
- The Jane Wadsworth Clinic at Imperial College, St Mary's Hospital
- 56 Dean Street Clinic, Chelsea & Westminster Hospital Foundation Trust
- Tavistock Centre for Couple Relationships (TCCR)
- Relate, Couple and Relationship Therapy

For details of sexual dysfunction and psychosexual clinics across the UK, contact:

- College of Sexual & Relationship Therapists (COSRT): www.cosrt.org.uk
- Relate, Couple and Psychosexual Therapy: www.relate.org.uk
- Tavistock Centre for Couple Relationships (TCCR): www.tccr.org.uk
- Sexual Advice Association (formerly the Sexual Dysfunction Association): www.sda.uk.net

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The worldwide web and sexual health

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Introduction

The internet has become an important part of our lives, and most people in developed countries now use it every day. Currently around 30% of the world's population has access, with growth estimated at 480% over this decade, most notably in Africa [1].

On the subject of sex and relationships, a large number of resources are available on the 'worldwide web'. Sites offer help, advice or information but also opportunities to 'chat', network and find new partners – but there is also potential for illegal activity in terms of the portrayal of sex online.

For those of us working in the field of health, awareness of what is 'out there' is important because it is often the basis of our patients' knowledge and can be a powerful influence on their beliefs about their illness, treatment and care.

Value and potential

Young people in particular find the internet an important source of information and advice – an American survey found that 75% of young people use the internet to look for health information [2]. The availability of such information can also be especially important for those living in areas where access to health information is limited. A study in Ghana found that 53% of young people used the internet to find health information, and that its use was particularly extensive among young people who were not attending school [3].

It can be argued that one of the internet's greatest strengths is the privacy it affords its users. Most people access the internet by themselves, at a computer they have control over. They have the scope to explore questions on any subject they choose without having to engage others in the process. As all of us working in sexual health are fully aware, there is a strong reluctance for people to ask healthcare professionals (HCPs) questions about sex. This reluctance can be compounded by anxiety, doubts and limited understanding. The internet, which provides a method of communication where confidentiality is seen as assured, can go a considerable way to enhancing knowledge and confidence. Anderson [4] concludes that not only does this privacy 'provide a unique opportunity for personal questions to be asked and pursued', it also 'encourages personal reflection and honesty about sexual health issues'.

Internet use for health promotion

As healthcare professionals, we should seek opportunities to enhance the public's understanding of sexual health-related issues – and developing online resources may be one such opportunity. Almost all internet sexual health promotion initiatives now take place via websites where professional control of content is assured. The web is attractive because it is a publishing format and can therefore be given the same professional care and attention as books, newspapers and similar media. Interactive websites are an option but this can be very challenging, both for site designers and for those offering health advice. Although the open-access format gives the web huge potential for public education, it also makes dealing with the potential diversity and magnitude of individual responses extremely challenging – which may deter websites from allowing qualitative interaction with individual users. We must acknowledge that as HCPs we are likely to encounter considerable hurdles in using this medium, not least due to ambiguities in UK law in respect of 'publishing' sexually explicit material. It has so far proved impossible to set out a standard of practice guaranteed to remain within the law. However, the Health Education Authority (now the HDA and part of NICE) issued a number of key principles encompassing both conduct and content that can be used to guide us (Panels 1 and 2).

The internet also provides an important means of sexual expression and fulfilment for a growing number of individuals and has transformed vicarious sex into an increasingly possible and attractive substitute for direct interpersonal contact [5]. 'Cyber-sex' can substitute for actual sexual contact, offering sexual gratification with no risk to physical safety. Increased concern about risk of sexually transmitted diseases and HIV, and a greater range of sexual content available, have led some people to experiment with new sexual activities, such as voyeurism by mutual consent or 'telephone sex', and this trend has been widely evidenced, for example by Gauthier and Forsyth and by Bergling *et al.* [5].

The internet also provides a mechanism for linking individuals 'with like-minded partners for social interaction including sexual experimentation' [6]. One means is through 'internet relay chat' (IRC). This is a way of communicating online, whereby two or more people interact in real time. Typically, the IRC user accesses a 'chat room', with a defined topic; all the people in the chat room can see each

Panel 1: Online education method guidance: practice/conduct

- The approaches and methods adopted to promote sexual health should recognise the diversity of sexual attitudes and sexual lifestyles.
- Communications should also promote mutual respect for self and others and the benefits to wellbeing that come from caring and emotionally fulfilling relationships.
- Messages should be accurate, clear and honest where there is uncertainty; they must not be victim-blaming, anti-sex or stereotyping.
- The target audience should be carefully defined and described – catch-all terms such as 'general population' or 'Black and minority populations' should not be used.
- The language used should be carefully chosen and properly justified by its purpose and intended outcome.
- The design and construction of all materials in the field of sexual health must be based on thorough research with a nationally representative target audience.
- The reaction of other audiences who may be reached by this material should also be assessed. All materials must be thoroughly pretested and modified accordingly.

Panel 2: Online education method guidance: materials/content

- Websites should demonstrate an integral commitment to educational objectives.
- Websites should be carefully targeted and should make clear at every level who the information is intended for.
- Explicit material should be sited in a broader context which demonstrates the purpose of using it; in particular, images should always be used alongside text.
- Explicit images should always indisputably show people aged 16 or over.
- Links to other websites should be made after proper review and should include details of the content of the remote site.
- Professional advice should always be sought if there is any doubt about the legality of a website's content.

other's messages popping up on the screen and add to them. IRC is completely public and so open to the interests, desires and prejudices of the entire online world. The uncontrolled, 'live' nature of IRC has so far made it unpopular as a medium for health promotion. However, given that it may allow access to the 'hard to reach', one could argue that this mode of communication should be explored further.

Potential pitfalls and limitations

From the perspective of global health promotion, those who are probably most at risk of preventable health problems, due to lack of education or living in poverty, are unfortunately the least likely to have access to such technologies. Barriers to access include cost, geographical location, illiteracy, disability and other factors that may limit people's ability to use such IT appropriately and effectively.

In addition, access to this information is unregulated and internet sites may have hidden agendas – for example, religious organisations that oppose sex before marriage or termination of pregnancy may offer links to seemingly genuine information and advice sites. It can be difficult for users to determine honest, accurate information from that which can be inaccurate or misleading, perhaps even dangerously so.

As a means for sexual gratification the internet is obviously not limited by the 'normal' constraints of society, so these avenues may also fuel some unsafe (and perceived by some as 'deviant') behaviours. 'Bare-backing' (sexual penetration without using a condom) and 'bug-chasing' (promotion and pursuit of sex with HIV-positive people without using a condom) have both been facilitated by internet forums, and many research findings provide evidence for this [5].

IRC communications, mentioned earlier, disappear as rapidly as they are generated, and this form of internet use has thus not been a major focus for anxieties about internet content. Even so, there are some concerns that IRC could be a means of gaining the confidence of individuals (such as children) with the intent to abuse this confidence.

Influence on sexual behaviour

While the role of the internet in making contacts for sexual reasons is widely recognised, data on partner-seeking activities on sex-oriented contact websites is still limited. However, we do know that while online (or indeed by text messaging), some people self-disclose or 'act out' more frequently or intensely than they would in direct person-to-person contact. They feel less inhibited – the so-called 'disinhibition effect' – whereby, for example, people reveal secret emotions, fears and desires, or show unusual generosity, kindness or aggression.

This behaviour may arise from the anonymity and invisibility when communicating online, and the resulting reduced sense of authority and responsibility – ironically identified earlier in this article as one of the internet's strengths. It has been suggested [7] that in most cases several causative factors interact and/or supplement each other, resulting in a complex, amplified effect. The authors list a number of factors that can lead to this 'disinhibition effect':

- *You don't know me* (dissociative anonymity)
- *You can't see me* (invisibility)
- *See you later* (asynchronicity, likened to an 'emotional hit-and-run')
- *It's all in my head* (When reading another's message, people may "hear" the words in their own voice, sub-vocalising as they read, thereby

projecting the sound of their voice into the other person's message.)

- *It's just a game* (dissociative imagination)
- *We're equals* (minimising authority)

Of course, there is a wide variation in activity and behaviour. Personalities vary greatly – for example, in the strength of defence mechanisms and tendencies towards inhibition or expression. Equally, the strength of underlying feelings, needs, and drive level are also significant. The above factors will interact with the personality variables, in some cases resulting in just a small deviation from the person's usual (offline) behaviour, while in other cases causing dramatic changes.

Furthermore, internet forums can create environments where exploitive behaviours may be perceived by those participating as 'normal' since they are not alone in their activities. A previously socially sanctioned behaviour that occurred in secrecy, among isolated individuals, may now generate a 'cyber-community' which supports and facilitates the behaviour.

Potential for abuse

The internet is the world's biggest publisher of pornography, so concerns about the easy availability of pornography on the web are certainly justified. Ironically, it is mainly the ever-increasing quality of the information on the web, and its potential as an educational tool, that have made its perceived dangers a focus for public attention. There is particularly strong public fear that children using the web will inevitably encounter pictures of pornography – indeed, research in 2005 [5] found that 90% of 8-to-16-year-olds had viewed pornography online, mostly when doing their homework.

Many believe that these IT innovations have created a global medium that facilitates exploitation and abuse – enabling trade in sex workers, child prostitution, and paedophilia, for example – and that the internet has facilitated the visibility and exposure of 'at-risk populations', such as (but not exclusively) women and children, while at the same time increasing the privacy and anonymity of sex offenders and perpetrators. These fears have been backed by a number of studies [8,9] contending that the internet has caused a surge in the production and distribution of child pornography and opportunities for predatory paedophiles to access children.

Attempts to respond to public anxiety about the availability of pornography, and other sexually explicit material, have highlighted to those of us working in sexual health promotion, just how difficult it is to control access to such websites.

Conclusion

Our perception of the internet may be a very positive one, whereby we see it as bringing the world's worth of information to our fingertips, the 'information super-highway' on which we all must travel if we are not to be left behind. At the other extreme, the internet is viewed as the most powerful tool of pornographers, paedophiles and extremists, an uncontrolled source of exploitation and corruption. A more balanced view sees the internet as much too complex to be assigned to either of these extremes – nevertheless, many of us are deterred from its use, for example, accessing explicit material to inform us in our work in sexual health.

The good news is that these technologies may help reduce health disparities by promoting health, preventing disease and supporting access to clinical care. However, both public and private sectors must work collaboratively to reduce the gap between those who have access and those who do not. This will need to include supporting health information technology access (both domestic and public), ensuring developments take into account the growing diversity of users, funding related research, ensuring quality of health information and support, and enhancing 'literacy' in technology [10]. Furthermore, researchers will need to explore the impact of technology on sexual and other behaviours.

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