SYPHILIS

Management of a syphilis outbreak in street sex workers in east London

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Sex Transm Infect 2006;**82**:437–438. doi: 10.1136/sti.2006.020461

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Accepted for publication 14 June 2006
Published Online First 28 June 2006

Objective: To describe the control and management of a syphilis outbreak in female street sex workers (SSWs) in east London.
Methods: Following the identification of several cases of infectious syphilis in SSWs in east London, a targeted service for screening and treatment of syphilis and other sexually transmitted infections was developed. A multidisciplinary team (MDT) joined an existing outreach service to facilitate this. Once it became apparent that this was not an isolated case, an outbreak control team (OCT) was established.
Results: Between April and December 2004 a total of 14 (58%) women with 15 cases of infectious syphilis were identified in 24 SSWs: 14/15 (93%) received treatment. Epidemiological treatment for syphilis was also given to the rest of SSWs at the initial visit. Several coexistent STIs were identified in this cohort. As part of the enhanced outbreak surveillance in north east London, 21 cases of infectious syphilis were reported in SSWs between April 2004 and December 2005.
Conclusion: Outbreak management in this population was challenging: an MDT approach was crucial in identifying and treating syphilis to prevent onward transmission. There was a high prevalence of syphilis and other STIs in this cohort, and we treated the majority of cases. The formation of an OCT enabled us to monitor the outbreak and implement control measures more effectively. The novel intervention we describe has proved valuable in helping to control this syphilis outbreak.

There has been a dramatic increase in cases of infectious syphilis in the United Kingdom. Although the increase is mainly in men who have sex with men (MSM),[1] there has been a sixfold and threefold increase in cases of infectious syphilis in heterosexual men and women, respectively since 1998.[1] In the south London outbreak in 2001, 23% of cases were linked to commercial sex workers.[2]

The provision of sexual health to street sex workers (SSWs) is challenging and requires targeting.[4] Many SSWs are drug dependent, with multiple social problems.[3 4] Sexual health is a low priority compared to issues such as housing and treatment for drug misuse. Furthermore, SSWs are more likely to engage in high risk sexual practices. Many SSWs find it difficult to access healthcare services because of criminal involvement and lack of transportation. Outreach overcomes some of these barriers by providing services at a more suitable time and at a familiar and less threatening venue.[4]

In east London the Maze Marigold Project (MMP) outreach team has supported female SSWs for several years. Two evenings a week the team visited known locations frequented by the women, to provide needle exchange, condoms, and refreshments. A daytime drop-in centre operated twice weekly providing the women with general support.

In early 2004, one SSW complained of multiple mouth ulcers. Within a few weeks several other women had oro-genital ulceration and/or body rashes. It was thought that these were sexually related and the team contacted the Ambrose King Centre (AKC), Genitourinary Medicine (GUM) Department, Royal London Hospital.

Following the first diagnosis of secondary syphilis, an outbreak was suspected and specific targeting to control the outbreak in this group was initiated.

METHODS

A novel intervention was developed to provide easily accessible treatment for this group and to prevent onward transmission of syphilis. This comprised immediate control measures, the setting up of an outbreak control team (OCT), and enhanced surveillance.

Immediate control measures

A nurse or health adviser from the GUM clinic joined the evening mobile outreach sessions. They identified women with possible infectious syphilis and encouraged asymptomatic women to be screened for syphilis and other sexually transmitted infections (STIs).

Women were invited to attend the MMP drop-in centre the next day. From here the SSWs were driven to the AKC accompanied by MMP staff.

A fast track service was set up at the GUM clinic and a designated waiting area was allocated. Refreshments were provided with a fast food meal at the end of the visit to encourage the women to stay until treatment was given.

All women were offered a full genitourinary screen and serology for syphilis, hepatitis B, hepatitis C, and HIV. Accelerated hepatitis B vaccination was recommended.[5] Treatment was given to cases of suspected infectious syphilis. As this was an outbreak situation, epidemiological treatment for infectious syphilis was given to all other women.

Outbreak control team and surveillance

Following the identification of infectious syphilis cases, the Health Protection Agency (HPA) was informed. An outbreak control team (OCT) was established with joint partnership between the North East London Health Protection Unit (NEL HPU), North East London (NEL) NHS, and voluntary services.

Abbreviations: AKC, Ambrose King Centre; GUM, genitourinary medicine; HPA, Health Protection Agency; MDT, multidisciplinary team; MMP, Maze Marigold Project; MSM, men who have sex with men; NEL, North East London; NEL HPU, North East London Health Protection Unit; OCT, outbreak control team; SSWs, street sex workers; STI, sexually transmitted infections

Table 1 Cases of syphilis diagnosed and treatment prescribed in SSWs seen at AKC

Stage of syphilis	No of cases	No treated	Treatment issued (see key for doses)			
			Benzathine penicillin	Azithromycin	Doxycycline	Azithromycin + doxycycline
Secondary	5	4	2			2
Early latent	6	5	2			3
Late latent	4	4		3	1	
Negative serology	9	7		7 epidemiologically treated		

Benzathine benzylpenicillin 2.4 MU IM immediately, azithromycin 2 g immediately, doxycycline 100 mg twice daily for 2 weeks in early latent cases, 200 mg twice daily for 4 weeks for late latent syphilis.

The OCT was responsible for controlling the outbreak through enhanced outbreak surveillance: a syphilis questionnaire was designed for all new cases of infectious syphilis diagnosed in NEL from 1 April 2004. The OCT also raised local and London-wide awareness of the outbreak and press statements were issued to local papers heightening public awareness of the situation. In addition, contacts of early syphilis cases were fast tracked at local GUM clinics.

RESULTS

Between April and December 2004, 24 SSWs were seen at AKC; 22/24 (92%) of the SSWs were crack cocaine or heroin users.

Fifteen cases of syphilis were diagnosed in 14 SSWs (58%) with one case of re-infection (table 1). Treatment of the women with syphilis was difficult. Only four SSWs were treated with the treatment of choice, intramuscular (IM) benzathine benzylpenicillin, the rest declined, limiting treatment options.

Also identified in this cohort were cases of gonorrhoea (five), chlamydia (two), pelvic inflammatory disease (one), trichomoniasis (three), hepatitis C (five), and one new HIV infection.

Of the 14 who were diagnosed with syphilis, 13 received follow up: nine at AKC, two in other GUM clinics, and two in Holloway prison.

Contact tracing of sexual partners was difficult as clients were untraceable.

North East London surveillance

In NEL clinics between April 2004 and December 2005 a total of 21 cases of infectious syphilis in female sex workers were reported to outbreak surveillance database. Of these 15 were seen by the AKC, five by the clinic in Holloway prison, and one by Homerton GUM clinic.

DISCUSSION

Outbreak management in this population was challenging and a multidisciplinary approach was crucial. The service was dependent on MMP bringing the SSWs to the AKC. Although this was resource intensive, the majority of women working in this area were seen and consequently new cases of infectious syphilis were identified and treated. Many women were found to have co-existent STIs, confirming that SSWs are a high risk group for STIs and are unlikely to self refer to GUM services, indicating that sexual health needs to be targeted towards SSWs.

Most SSWs declined IM penicillin limiting treatment to oral therapy. As poor adherence to doxycycline was anticipated, azithromycin 2 g immediately was prescribed. Although azithromycin has been shown to be as efficacious as IM benzathine benzylpenicillin[6] and has been used for epidemiological treatment of syphilis,[7] we were concerned about macrolide resistance which has been reported elsewhere.[8] Local data regarding resistance are lacking and as we had adherence concerns we used a combination of azithromycin and doxycycline. Follow up rates were surprisingly good, but did require active recalling on outreach.

The formation of an OCT enabled us to monitor the outbreak and implement control measures more effectively. The novel proactive interventions we have described proved valuable in helping to control this syphilis outbreak. Although resource and labour intensive such interventions can benefit the community as a whole.

ACKNOWLEDGEMENTS

We thank the Maze Marigold Project and all members of the outbreak team.

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Competing interests: none.

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