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The delivery of hepatitis B vaccine

Hepatitis B is a serious preventable infection that is common in men who have sex with men. Historically, uptake of the vaccine has been poor in this group. Leigh Chislett describes how the introduction of a nurse-led service significantly increased uptake of the vaccine at a London clinic.

KEY WORDS

Hepatitis B
Men who have sex with men
Sexually transmitted disease
Vaccination
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Hepatitis B is a potentially life-threatening sexually transmitted disease (STD). At least one in 20 people who acquire hepatitis B become lifelong or 'chronic' carriers. This can lead to long-term complications including liver cancer or cirrhosis, yet the disease is preventable and there has been a recombinant vaccine available since 1987.

The hepatitis B virus is found in blood, semen, saliva and other body fluids, and is commonly passed on during sex. Men who have sex with men (MSM) are at great risk of acquiring this infection. Evidence shows that one in six MSM have been previously infected with hepatitis B and rates of transmission continues to be high within this group (Hart et al, 1993). Although hepatitis B is highly infectious, vaccination makes it the only sexually transmitted infection (STI) that is preventable without behavioural change. Only 42 per cent of MSM have been vaccinated against hepatitis B (Hart et al, 1993).

Hepatitis B vaccine The World Health Organization recommends a universal vaccination policy. However, in the UK the vaccine is targeted only at high-risk groups (Box 1). Using condoms can reduce the transmission of hepatitis B and other STIs, including HIV, but because hepatitis B may be acquired by means other than sex, the safer sex messages may have less of an impact.

Sexual health clinics are in an ideal position to offer vaccination to sexually active MSM. However, evidence suggests that clinics have been unsuccessful in offering the vaccine and completion rates for the vaccine course have been low (Bhatti et al, 1991). In 2000 only 5,014 MSM were vaccinated in genitourinary medicine clinics in England.

The Victoria Clinic An audit of the service at the Victoria Clinic for Sexual Health, London, showed that the uptake of the vaccination course was low and many patients did not complete the course. The team at the clinic decided to address this problem.

The National Strategy for Sexual Health and HIV (Department of Health, 2001) set a target for the delivery of the vaccine (Box 2). Ensuring patients complete the course of vaccinations is important for the achievement of high rates of immunity. The first dose will cause an immune response in about 40 per cent of people. This increases to 88 per cent with the second dose and 98 per cent with the third.

Identifying the problems The multidisciplinary team at the Victoria Clinic looked at why they were

failing to deliver the vaccination. Medical staff said that they often focused on the presenting problem during consultations, and with the time constraints of the doctor's appointment it meant that the vaccine could often be overlooked. All staff groups felt that HIV was taking priority over hepatitis B, which had a lower profile with staff and patients.

A significant proportion of the clinic's patients, such as those attending for an HIV test, do not see a doctor. This was identified as a barrier to vaccination because the course requires a medical prescription. The vaccine course requires three injections over a period of six months. To access the vaccination, the patient has to book in for a medical appointment. The wait for medical appointments can be up to two weeks, and an initial visit could take up to two hours and involves the recording of a sexual history. The second and third injections required further appointments with a nurse. There were only a limited number of evening appointments, meaning patients often had to return during working hours. All of these factors were inconvenient and would make the patient less likely to

BOX 1. GROUPS AT RISK OF HEPATITIS B

- Babies born to infected mothers
- Intravenous drug misusers
- Close family contacts of someone with the virus
- Individuals who change sexual partner frequently
- Men who have sex with men
- Prostitutes
- Haemophiliacs receiving regular blood transfusions or blood products or carers responsible for the administration of such products
- Patients with chronic renal failure
- Health care workers and other occupational risk groups
- People with severe learning disabilities, living in residential care
- People travelling to areas of high prevalence and those in custodial institutions

BOX 2. NATIONAL SEXUAL HEALTH AND HIV STRATEGY TARGETS

- All MSM attending sexual health clinics should be offered the hepatitis B vaccine by the end of 2003
- Uptake of first dose vaccine to reach 80 per cent by the end of 2004; 90 per cent by the end of 2006
- Completion rates to reach 50 per cent by end of 2004; 70 per cent by end of 2006

Source: (DoH, 2001)

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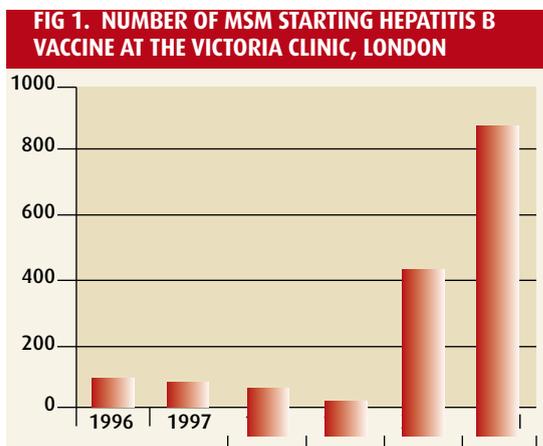
complete the course. The staff also felt that the lack of written and verbal information meant patients were unclear about the importance of the vaccination and why it is important to complete the course.

Addressing the problems The multidisciplinary team then looked at how they could address the barriers to patients accessing the hepatitis B vaccine. The following solutions were identified:

- A nurse-led hepatitis B vaccination service in which the nurses are responsible for the whole process of care from assessment to delivery of the vaccine. This was achieved by developing a patient group direction;
- Nurses were given training on the epidemiology of hepatitis B, documentation and the management of anaphylaxis;
- A training morning for all staff groups raised awareness of the infection;
- A hepatitis B information campaign was developed to target MSM;
- Working in partnership with CLASH (Central London Action on Street Health), a gay men’s venue outreach team, the profile of hepatitis B was raised among local gay men and uptake of the vaccine was encouraged;
- ‘Sorted’, a twice-weekly evening walk-in hepatitis vaccine service was launched and run exclusively by nurses. In addition, the nurse-led service was extended into the more general service;
- To improve accessibility, one of the evening services was held in a health centre in Soho, where there is a large concentration of gay venues;
- Registration was simplified for the walk-in services to reduce waiting time;
- Nursing documentation was streamlined to speed patient throughput.

Results In 1999 the Victoria Clinic commenced vaccination in 122 MSM (three per cent of the national total of vaccinations given to MSM). The nurse-led service was introduced in February 2000. The number vaccinated rose to 527 in 2000 and 936 in 2001 (Fig 1 and Table 1).

We reduced the time of the initial visit from up to two



hours to 20 minutes.

Future developments A clinic audit in July 2002 showed that half of our patients completed the six-month vaccine course. Although this meets the national targets, staff felt this was too low. There is an alternative to the six-month course: an accelerated course where the vaccine is administered over 21 days.

If reducing the course to three weeks from six months increased completion rates, a greater proportion of MSM would be protected (even though immune response rates would be slightly lower). The clinic has started to offer the accelerated course and preliminary data shows that completion rates have risen to 79 per cent.

The nurse-led vaccine services were branded with the name Sorted to give them a clear identity. In a recent survey, one in three MSM in central London gay venues associated the Sorted brand as a place to access the hepatitis B vaccine. We would encourage others to use the Sorted brand to promote hepatitis vaccine services to MSM.

Conclusion By making access to and delivery of hepatitis B vaccine easy, fast and convenient, we have significantly increased uptake in this high-risk group. We suggest that this nurse-led model could be replicated in other sexual health clinics to help reach the targets set out in the National Sexual Health and HIV Strategy. ■

TABLE 1. NUMBER OF MEN VACCINATED AGAINST HEPATITIS B AT GUM CLINICS IN THE UK COMPARED WITH THOSE VACCINATED AT THE VICTORIA CLINIC (PUBLIC HEALTH LABORATORY SERVICE, 2001)

	1996	1997	1998	1999	2000	2001
National (GUM clinics in England)	4,920	4,663	4,862	4,760	5,014	5,811*
Victoria Clinic/Sorted	88	75	160	122	527	936
Percentage of national total	2%	2%	3%	3%	10%	16%

*Personal communication from the Public Health Laboratory Service