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AN INNOVATIVE SEXUAL HEALTH MEDICATION ORDER SYSTEM FOR THE FAR WEST AREA HEALTH SERVICE

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This article describes the development of sexual health services in the Far West Area Health Service, and the contribution of a medication order system that has been established between the Sydney Sexual Health Centre (SSHC) and the Far West Area Sexual Health Service (FWASHS).

The management of sexually transmissible infections (STIs) in rural and remote areas is difficult because of issues of access to health care and treatment,^{1,2,3} confidentiality,^{4,5} community attitudes,^{6,7} and the transient nature of some sectors of the population. Many models of care—such as syndromic management (treatment based on patterns of symptoms and signs rather than on specific aetiological diagnoses)—have met with limited success due to inaccurate diagnosis and treatment and poor patient follow-up.^{8,9} The prevalence of STIs in rural and remote populations of Australia is not completely understood; however, evidence exists demonstrating higher rates of STIs among the indigenous population.^{2,10,11}

The Far West Area Health Service (FWAHS) provides health care in rural and remote NSW across an area equivalent to one-third of the landmass of NSW, and has a population of 47,563.¹² Thirty-three per cent of these residents are aged 15–40 years, and 13 per cent identify as indigenous Australians. The FWAHS has the largest percentage indigenous population, compared with the other area health services in NSW, which reflects its remoteness.

SEXUAL HEALTH SERVICES IN FAR WESTERN NSW

Pre-1998

Prior to the creation of two area health services for western NSW in 1998, the Far West Area Health Service and the

Macquarie Area Health Service, sexual health services to far western and north western NSW were provided by a centralised model based in Dubbo. Outreach services to several sites, including Broken Hill, were provided by medical and nursing staff. Visits varied in frequency from monthly to three-monthly, resulting in a restricted service. Between visits, communication between local primary care providers and the service was limited. In addition, there was also a full-time Aboriginal sexual health worker based at Walgett, and an Aboriginal health worker based at Dubbo who had a part-time role in sexual health. Both these workers were employed by the community-controlled health services.

A new sexual health service for the Far West Area Health Service

Since 1999, four sexual health nurse specialists (SHNs) located at four sites in the FWAHS (Broken Hill, Bourke, Lightning Ridge, and Dareton) have provided the new foundations of a regionalised sexual health service. This service is supported by medical staff from the Sydney Sexual Health Centre (SSHC), a large urban sexual health centre. Specialist medical officers visit each site on a monthly basis and provide telephone support to the nurses between visits. The SHNs work in collaboration with four Aboriginal sexual health workers, who are employed by the community-controlled health services at the same sites.¹³ The SHNs link closely with the general practitioners in the towns, in managing sexual health clients. Some of the SHNs fulfil roles other than sexual health care, assisting with other primary health care roles and covering staff absences.

It was anticipated that the four SHNs would make most of the diagnoses of STIs in the FWAHS through their STI screening activities; however, as nurses in NSW cannot prescribe medication, immediate treatment of STIs was hindered by the infrequent visits of the medical staff.

Therefore, a system was implemented whereby an SHN was able to supply and administer medication to patients. This system uses two types of medication orders: standing medication orders, and faxed medication orders.

Standing medication orders

Standing orders are pre-authorised medications for specific sexual health conditions. Using a standing medication order, the SHN can administer medication when the diagnosis is made, according to set protocols, without first having to speak to a doctor. The seven conditions managed using the standing orders have been authorised by sexual health physicians from the SSHC and approved by the Far West Area Drug and Therapeutics Committee.

Faxed medication orders

Where the required treatment falls outside current predetermined standing orders, or the patient's condition is complicated, the SHN telephones the SSHC to speak to a medical officer for management and treatment advice. If medication is indicated, a faxed order is used.

During 2001, a quality audit was undertaken of the medication order system. The aim was to 'map' both the medication order system and the conditions managed using this system. The contribution of the newly-expanded sexual health service to the identification and management of treatable STIs in the Far West of NSW, was also described.

METHOD

To map the medication order system, the staff responsible for its development were interviewed and the protocols for using existing standing orders were reviewed. All standing and faxed medication orders received throughout 2000 at the SSHC were manually reviewed, and a profile was created of the conditions that were managed.

The number of treatable and notifiable STIs (that is, chlamydia, gonorrhoea, and syphilis) diagnosed by the staff of the FWASHS was then compared to the total number

of cases of each infection diagnosed within the FWAHS during 2000. This information was obtained from the NSW Notifiable Disease Database (NDD) via the Health Outcomes Information and Statistical Toolkit (HOIST). Similar information was obtained from the NDD for the years 1996–1999.

Study population

All patients presenting to the FWASHS requiring treatment for sexual health conditions were included in the study. Patients presenting to the FWASHS are identified by using a code for their name. Information such as country of birth and Aboriginality were not recorded on medication forms and were not collected for this study. Patient medical records were not viewed.

Data were manually extracted from individual medication order forms received at the SSHC and entered into a database. Percentage calculations were used to compare the treatable conditions managed by the FWASHS and the whole of the FWAHS.

Ethical considerations

The study was approved by the FWAHS Health Research Ethics Committee. Individuals and communities were not identified in this study. The identity of any individual was unknown to the investigators.

RESULTS

Mapping the medication order system

Standing orders

The standing order is faxed by the SHN to the SSHC to be signed by a sexual health physician within 24 hours of dispensing the medication, in accordance with the *NSW Poisons and Therapeutic Goods Act (1966)*. The information provided on the faxed treatment request should include date, relevant medical history, allergy status, patient identification, and requested medication and its indication. Table 1 shows the standing orders available in 2000.

TABLE 1

INDICATIONS FOR AND MEDICATIONS AVAILABLE THROUGH STANDING ORDERS, FAR WEST AREA SEXUAL HEALTH SERVICE, NSW, 2000

Indication	Medication
Genital warts	Podophyllin
Trichomoniasis	Tinidazole
Chlamydia (urethral–endocervical–rectal)	Azithromycin
Gonorrhoea (urethral–endocervical–rectal–pharynx)	Ciprofloxacin
Hepatitis B vaccine schedule	Ecombinant hepatitis B vaccine
Hepatitis A vaccine schedule	Hepatitis A vaccine (HM 175 strain)
Emergency (post coital) contraception	Levonorgestrel + ethinylloestradiol +/- metaclopramide

TABLE 2**NUMBER OF REQUESTS FOR STANDING ORDERS FOR THE SEVEN PRE-AUTHORISED CONDITIONS, FAR WEST AREA SEXUAL HEALTH SERVICE, NSW, 2000**

Condition managed or treatment prescribed	n	%
Chlamydia	33	(35)
Gonorrhoea	7	(8)
Trichomoniasis	7	(8)
Genital warts	3	(3)
Hepatitis B vaccination	29	(31)
Hepatitis A vaccination	2	(2)
Emergency contraception	12	(13)
Total	93	(100)

TABLE 3**CONDITIONS MANAGED THROUGH THE USE OF FAXED ORDERS, FAR WEST AREA SEXUAL HEALTH SERVICE, NSW, 2000**

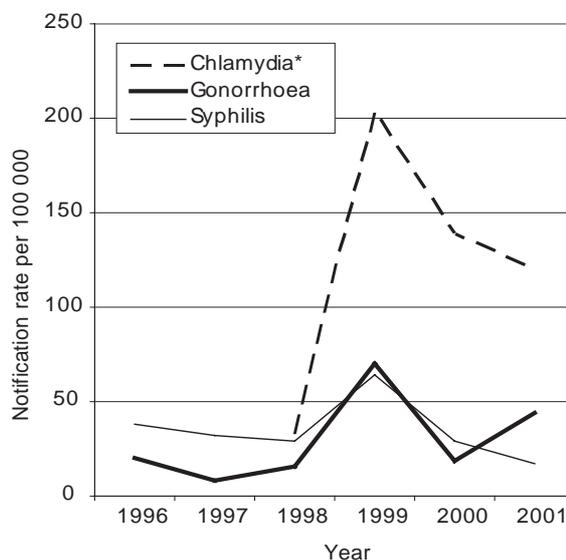
Condition managed or treatment prescribed	n	%
Syphilis (any stage)	16	(25)
Injectable progesterone contraception	21	(33)
Urinary tract infection	8	(13)
Chlamydia contact	6	(9)
Pelvic Inflammatory Disease	5	(8)
Bacterial vaginosis	3	(5)
Trichomonas contact	1	(2)
Other:		
vaginal candidiasis (1)	3	(5)
oral contraceptive pill (1)		
genital herpes (1)		
Total	63	(100)

Faxed orders

The SHN faxes a medication order form to the consulting doctor containing relevant information discussed during the telephone consultation. The doctor then orders the medication and faxes the order form back to the SHN for administration. The medication that can be ordered and administered is restricted by the *NSW Poisons and Therapeutic Goods Act (1966)*, which stipulates that the medication be a single treatment dose. Only doctors and pharmacists are able to dispense ongoing courses of medication.

Conditions managed**Standing orders**

Ninety-three standing order requests were received from FWASHS during 2000. Of the seven pre-authorised

FIGURE 1**NOTIFICATION RATE PER 100,000 POPULATION FOR SELECTED SEXUALLY TRANSMISSIBLE INFECTIONS, FAR WEST AREA HEALTH SERVICE, NSW, 1996–2001**

* Genital chlamydia became notifiable by laboratories in October 1998.

Source: Communicable Diseases Branch, Notifiable Diseases Database (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

conditions, treatment was requested most commonly for chlamydia (35 per cent) and hepatitis B vaccination (31 per cent), and least often for hepatitis A vaccination (two per cent) (Table 2).

Faxed orders

There were 63 faxed orders received from the FWASHS during 2000. Faxed orders were most commonly completed for injectable progesterone contraception (33 per cent) followed by treatment for syphilis (25 per cent). Other conditions treated by faxed order were bacterial vaginosis, urinary tract infections, pelvic inflammatory disease, and STI contacts (Table 3).

Trends in STI treatment in far western NSW

During the study period, the Far West Public Health Unit (FWPHU) received 66 notifications for genital chlamydia, five for gonorrhoea, and 24 for syphilis.¹⁴ Of these notifications, the FWASHS provided diagnosis and treatment for 60 per cent of the cases of chlamydia, 40 per cent of cases of gonorrhoea, and 58 per cent of syphilis. Overall, 56 per cent of all treatable STIs notified to the FWPHU ($n = 55$) were diagnosed and treated by the FWASHS using the medication order system. Figure 1

shows the change in notification rate for selected STIs before and after the development of the current sexual health services.¹⁴

DISCUSSION

People with sexual health problems in isolated and small communities are likely to be fearful of recognition and breaches of confidentiality and therefore may be reticent to seek care. The medication order system overcomes some of these barriers to care, by offering a discreet and confidential service. Patients are able to access specialist sexual health care via the sexual health nurse in areas where there are limited or no medical services available. As the title 'sexual health nurse' may deter patients from accessing the service, some nurses have several roles and titles: for example, women's health nurse or primary health care nurse. An expanded role for remote area nurses is not uncommon because of staff shortages. Also, medication does not need to be purchased at the local pharmacy; it is provided free of cost by the sexual health service.

Faxed orders were used less frequently than standing orders, reflecting that common conditions are treated using the pre-authorised standing orders. The number of faxed orders used also may be influenced by the experience of the sexual health nurse and other local medical practitioners. To improve both the efficiency of the system and access to patient care, some of the frequently requested faxed orders have become standing medication orders: for example, repeat doses of injectable progesterone contraception, treatments for bacterial vaginosis, and contacts of gonorrhoea and chlamydia.

The development of the service has more than doubled the notification rate of bacterial STIs in the FWAHS with more than 50 per cent of cases managed using the medication order system. This demonstrates a significant public health benefit to the people of Far Western NSW.

The medication order system is easy for the sexual health nurses to access in remote areas and provides immediate medical support for isolated practitioners. Both the remote staff and their patients benefit from the arrangement. The monthly visits by medical officers allow for regular supervision of patient records, staff education, and direct consultation for patients with complicated conditions. The visits also allow medical officers to gain valuable experience working in remote areas.

CONCLUSION

Most common sexual health treatments provided by the FWASHS can be accessed using the medication order system. This medication system, with the assistance of medical support, provides a prompt, efficient, confidential service with a large public health benefit. This model of management of STIs in this rural and remote location may serve as an example of effective resource use in this setting.

CONTRIBUTORS

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