Estimates of reports of notifiable diseases by general practitioners in regional Western Australia

Heath Kelly and Judy Donnelly, Southern Public Health Unit, Albany and Bunbury, PO Box 1411 Albany, Western Australia 6331

Abstract

We surveyed the attitudes of general practitioners to the notification of gazetted diseases in the south-west of Western Australia. Notification rates were calculated from the number of notifications recorded by the Southern Public Health Unit or the Communicable Disease Control Program of the State Health Department, and the estimated population of the region, the metropolitan area and the State. Of the 80% of general practitioners responding to the survey, 96% advised they intended to notify all gazetted diseases they diagnosed. Notification rates in the south-west of Western Australia ranged from 380 to 900 per 100,000 population, compared with approximately 450 per 100,000 population in the metropolitan area. ***Comm Dis Intell*** **1997; 21:205-207**

Introduction

There are a number of diseases for which there is a statutory obligation to notify the State and Territory health departments upon diagnosis. The notification process is important to[1]:

- identify cases of disease that require immediate public health control measures, for instance, the occurrence of meningococcal disease[2];
- evaluate the effectiveness of control programs for preventable diseases, such as measles[3];
- identify and monitor emerging diseases, for example, hepatitis C[4];
- identify risk factors for certain diseases and to support effective prevention measures, such as immunisation against *Haemophilus influenzae* type b[5];
- monitor changes in disease agents through laboratory testing, such as the changing antibiotic susceptibility pattern of multiple drug-resistant *Staphylococcus aureus*[6]; and
- evaluate hypotheses about diseases, for example the person-to-person transmission of the human immunodeficiency virus (HIV)[7].

Although notification of gazetted diseases is considered important, compliance by medical practitioners has not always been thorough[8]. In most States and Territories of Australia, diseases must be notified directly by laboratories to the relevant authority within the State and Territory health departments. In Western Australia, such legislation has been drafted but not yet enacted. This study reports on general practitioner attitudes to disease notification in the south-west of Western Australia and compares regional, metropolitan and State notification rates.

ISSN 0725-3141
Volume 21
Number 15
24 July 1997

Contents

Methods

In Western Australia, as in other States and Territories, notification of gazetted diseases is a statutory obligation for general practitioners as part of the Health Act. In the south-west of Western Australia, with a population of 235,000, disease notifications are sent to the public health unit at it's two regional centres. They are recorded and sent to the Communicable Disease Control Program in Perth for collation. In addition to doctor notifications for all diseases (primary ascertainment source), informal de-identified data on patients are provided by ten private and public laboratories in the region (secondary ascertainment source). The patient's date of birth and name of the notifying doctor allow cross-checking of notifications from medical practitioners. When a laboratory identifies a notifiable disease, this is recorded on the laboratory report which is sent to the referring medical practitioner. Feedback on all diseases notified and of outbreak investigations in the region is provided by a monthly bulletin published by the public health unit.

In early 1996, a questionnaire was sent to all medical practitioners in the region to determine attitudes to disease notification, and to estimate reported notification rates. Notification rates were calculated as the number of notifiable diseases reported per 100,000 population in the region. These rates were compared with those for metropolitan Western Australia. Population data by region and year were based on the health statistics calculator of the Epidemiology Branch of the Health Department of Western Australia. This program estimates population by interpolation of data supplied by the Australian Bureau of Statistics from the 1991 census.

Results

Notification data were available for cross-checking with laboratories for the 18 months from January 1995 to June 1996 for the Great Southern region (population 70,000) and for the first six months of 1996 for the South West region (population 165,000). Because of a change in policy by one of the major laboratories, only summary data were available after June 1996 and cross-checking of individual records is no longer possible. The number and source of cases notified by region and period are shown in Table 1. Neither laboratories nor doctors alone provide a complete source of notifications. Some diseases require only a clinical diagnosis and cannot be laboratory confirmed, while others are notified only by doctors or laboratories when both are potential notification sources. In our study, between 32% and 58% of all notifications were provided by doctors only. Notification rates for corresponding periods for the South West Region and Great Southern Region, the Metropolitan Region and the State are shown in Table 2. The higher notification rates in the South West region in the first half of 1996 were largely due to an outbreak of Ross River virus[9]. Of the 188 general practitioners surveyed, 150 (80%) responded. Of these, 96% indicated they intended to notify all notifiable diseases which they diagnosed, and 91% thought they notified at least 80% of all diagnosed diseases.

Discussion

Notification rates in the south-western regions of Western Australia are similar to those in the metropolitan area, which has a similar demographic profile[10]. Notification rates for the State are included for completeness but not for comparison, since notification rates of some diseases, particularly sexually transmissible diseases and enteric diseases, are substantially higher in some parts of the State[11]. More than 90% of general practitioners in the south-west of Western Australia indicated they notified at least 80% of all notifiable diseases of which they were aware.

A conservative estimate of notification rates can be calculated by assuming that non-respondents to the questionnaire are also unlikely to notify gazetted diseases. Despite the best intentions of doctors to notify gazetted diseases, an estimated 90% of all diagnosed gazetted diseases are notified. A conservative rate can then be estimated as 80% of the responders to the survey, notifying 90% of gazetted diseases. This is equivalent to a notification rate of 72%, which is higher than the estimated 50% for New South Wales[8].

Processes used in the South West region of Western Australia which improve the notification rate include:

- Laboratory cooperation: all laboratory reports confirm that a

Table 1. Number of cases notified in the South West and Great Southern regions of Western Australia, January 1995 to June 1996

Source of notification	Number of cases notified by region and year			
	South West 1995	Great Southern 1995	South West Jan to Jun 1996	Great Southern Jan to Jun 1996
By doctor and laboratory (A)	ns	97	706	83
By doctor only (B)	ns	165	362	65
By laboratory only (C)	ns	21	79	16
Notifications on data base (A)+(B)	749	262	1068	148

ns. Not specified

Table 2. Comparison of notification rates for the South West and Great Southern regions of Western Australia with other regions in the State

Period	Region	Cases notified	Source of data	Estimated popualation	Notification rates per 100,000 population
1995	South West	749	SPHU	163,271	459
	Great Southern	262	SPHU	69,543	377
	Metropolitan	5379	CDC	1,254,786	429
	Western Australia	9410	CDC	1,722,702	546
1996	South West	1513	SPHU	167,968	901
	Great Southern	288	SPHU	69,721	413
	Metropolitan	6093	CDC	1,271,321	479
	Western Australia	11054	CDC	1,744,401	633

SPHU Southern Public Health Unit

CDC Communicable Disease Control, Perth

patient has a notifiable disease when such a disease has been identified;

- Regular feedback: each month general practitioners, laboratories and community health nurses receive a list of notifiable diseases in the region for the previous month, with clinical comments as appropriate;
- Investigation and reporting of outbreaks: evidence is provided that action is taken when an outbreak occurs.

Despite the availability of informal laboratory notifications in this study, between one-third and one-half of all notifications were reported by doctors only. This proportion may be improved when laboratory notification is formalised by legislation, but these results suggest that reliance on any single notification source is likely to continue to under-estimate disease prevalence. To improve the quality of notifiable disease surveillance, an active liaison needs to be maintained between primary care providers, specifically general practitioners and community health nurses, and the State and Territory departments of health that are responsible for notifiable disease legislation.

Acknowledgements

We would like to thank Dr Aileen Plant, Department of Public Health of the University of Western Australia, for her comments on an earlier draft of this report. Jag Atrie of the Communicable Disease Control Program in Perth kindly provided notification and population data for Western Australia, and commented on the report.

References

1. Baker M, Roberts A. A new schedule of notifiable diseases for New Zealand. *NZ Public Health Rep* 1996;3:33.
2. Cartwright KA, Stuart JM, Noah ND. An outbreak of meningococcal disease in Gloucestershire. *Lancet* 1986;ii:558-561.
3. The National Vaccine Advisory Committee. The measles epidemic. *JAMA* 1991;266:1547-1552.
4. Crofts N, Hopper JL, Bowden DS *et al.* Hepatitis C virus infection among a cohort of Victorian injecting drug users. *Med J Aust* 1993;159:237-241.
5. McIntyre P. Invasive *Haemophilus influenzae* type b disease in Australia: the beginning of the end? *Med J Aust* 1992;156:516-518.
6. Riley TV, Rouse IL. Methicillin-resistant *Staphylococcus aureus* in Western Australia, 1983 to 1992. *Comm Dis Intell* 1994;18:226-229
7. Chant K, Lowe D, Rubin G *et al.* Patient-to-patient transmission of HIV in private surgical consulting rooms. (Letter). *Lancet* 1993; 342:1548-1549.
8. Bek MD, Lonie CE, Levy MH. Notification of infectious diseases by general practitioners in New South Wales. *Med J Aust* 1994;161:538-541.
9. Lindsay M, Oliviera N, Janiska E *et al*. An outbreak of Ross River virus disease in the south-west of Western Australia. *Comm Dis Intell* 1996;20:136-139.
10. Sommerford P, Fitzgerald P, Gattorna L *et al.* An overview of the health of residents of the Southern Health Authority: 1995. Perth: Health Department of Western Australia, 1995.
11. Herceg A, Oliver G, Myint H *et al.* Annual report of the national notifiable diseases surveillance system. *Comm Dis Intell* 1996;20:440-464 .