

DOCTORS' NOTIFICATIONS OF PERTUSSIS

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This article describes the results of a telephone survey of medical practitioners conducted by the Northern Rivers Public Health Unit (PHU) to determine the reasons why doctors did not notify cases of pertussis directly to the PHU and to identify strategies to improve this situation. The *NSW Public Health Act 1991* requires doctors, hospitals, laboratories, schools and child care facilities to notify cases of pertussis. The North Coast Area had the highest number of pertussis notifications in NSW for 1995 (25 per cent of all cases) but only 18 per cent of these cases were notified by doctors.

Pertussis, or whooping cough, is a serious condition in children under two years of age and often results in admission to hospital. It is a highly contagious bacterial disease. The clinical diagnosis criterion for pertussis is a cough illness with one of the following:

- paroxysms of coughing
- inspiratory 'whoop' without other apparent cause
- post-tussive (post-cough) vomiting
- a link to a laboratory-confirmed case.

The laboratory criterion for diagnosis of pertussis is isolation of *Bordetella pertussis* from a clinical specimen taken from the nose or throat or detection of *Bordetella*-specific IgA from the serum of a patient with a clinically compatible illness.

The notification procedure for pertussis recommended to doctors is to telephone the PHU once a provisional clinical diagnosis has been made. The PHU's response, in consultation with the patient's doctor, may include contact tracing, immunisation advice, advice on treatment, public awareness campaigns and exclusion of unimmunised children from child care facilities.

Information from notifications is included in the NSW Infectious Diseases Surveillance System (IDSS). Feedback to the notifying agencies and doctors includes regular reporting in the *North Coast Health Bulletin* and the *NSW Public Health Bulletin*.

METHODS

Relevant information on pertussis notifications in the North Coast Area, including sources of notifications and case details, was gathered from the IDSS.

The reliability of notifications of pertussis in 1995 by doctors in the North Coast Area was determined by comparing their notifications with those from laboratories and other sources as identified on the IDSS. Doctors were identified who had not notified cases of pertussis that had subsequently been notified by the laboratories to whom these doctors had sent specimens.

A questionnaire was developed and piloted for use with these doctors. Telephone interviews were conducted with 21 doctors from the North Coast Area, including three doctors from Grafton and 18 from the Tweed and Mid North Coast areas, during May and June 1996. Doctors from the Richmond area were excluded at the request of the Northern Rivers Division of General Practice because they were already participating in an immunisation project.

RESULTS

Infectious Diseases Surveillance System

Of the 341 cases of pertussis notified to the PHU in 1995, 62 (18 per cent) were notified by doctors. Other notifications came from laboratories, hospitals, a preschool, a school, a family day care centre and a child care centre (Table 8).

The 262 laboratory notifications of pertussis during 1995 were a result of tests requested by 97 doctors. Only 12 per cent of the 97 doctors who received laboratory confirmation of their pertussis cases directly notified some of these cases to the PHU. One general practitioner was responsible for 23 per cent of pertussis notifications from general practitioners.

Towns and centres with the highest numbers of pertussis cases included Murwillumbah (13 per cent), Casino (10 per cent), Lismore (8 per cent) and Dunoon (5 per cent), with 88 towns and centres having cases.

Most cases (76 per cent) were under 21 years of age and 30 per cent were under three years of age.

Questionnaire findings

Of the 32 doctors identified for interview, 21 agreed to participate, two declined and the remainder were unavailable.

The 21 participating doctors reported seeing an estimated 227 cases of suspected pertussis within the previous 12 months. Of these cases 9 (4 per cent) were notified to the PHU. A total of 167 (74 per cent) of the estimated 227 suspected cases had specimens collected

TABLE 8

SOURCE OF FIRST NOTIFICATION OF CASES OF PERTUSSIS TO THE NORTH COAST PUBLIC HEALTH UNIT, 1995

Notifier	n	%
Doctor	62	18.2
Hospital	13	3.8
Laboratory	262	76.8
Other	4	1.2
Total	341	100.0

for laboratory testing, of which 99 (59 per cent) were confirmed as cases.

As many doctors reported that they had never notified an infectious disease to the PHU they could not comment on any problems with the notification process. Problems that were identified included: an inability to contact an appropriate officer immediately (3), difficulty finding forms or telephone numbers (2), being told to follow up contacts (1), and the confidentiality of patient information (1). The doctors who notified the PHU by mail reported no problems with the notification system.

Not all doctors realised that they could notify the PHU by telephone, with four doctors suggesting that this would assist with notification. A toll-free number and a hot-line were suggested. Four doctors suggested improving the knowledge of doctors on the notification procedure. One suggested distributing stickers with a list of notifiable conditions, and another three suggested regular reminders and education. Financial incentives were suggested by two. Suggested alternative methods of notifying the PHU included by fax (2) and e-mail(1). Other suggestions included obtaining consent from the patient or family to notify (1), allowing laboratories to notify for them (1) and making sure that an appropriate person could be contacted during weekends (1). Five doctors had no suggestions.

Eleven doctors had no knowledge of the role of the PHU when notified of a case of pertussis. Other doctors reported surveillance (4) and contact-tracing (6) as the role of the PHU. Only one doctor did not want feedback on notifications to the PHU. Suggestions for feedback mechanisms included through the Division of General Practice newsletters (11), the *North Coast Public Health Bulletin* (9), laboratory reports (1), individual feedback (2) media coverage during outbreaks (1), monthly reports (2), personal letters (1) and the regular Queensland information sheet (1).

Knowledge of the conditions that doctors are required to notify by telephone to the PHU was poor, with six doctors being unable to list any. The most commonly correctly cited were pertussis (9) and measles (9), others were food-related illness (3) and gastroenteritis (3). The only doctor who knew all the notifiable conditions had a list in their office.

DISCUSSION

Laboratory notifications were the most comprehensive source of notifications for pertussis available to the North Coast PHU. However it is difficult for a PHU to take appropriate and timely action if the first or only notification is through the laboratory as there can be up to a seven day delay from the time of the provisional clinical diagnosis until laboratory confirmation is available. Many doctors commented that they were often unsure that their diagnosis

of pertussis was correct, and that the laboratories would always notify confirmed cases. Uncertainty may be a major deterrent for doctors notifying pertussis. One laboratory carried out 547 tests for pertussis in 1995 and found that only 24 per cent of all tests were positive.

Limited knowledge of notifiable diseases and the notification process also contributed to the poor rate of notification by doctors. Information on the role of the PHU in response to notifications, regular reminders of notifiable conditions and education on the diagnosis of pertussis are necessary to improve notifications of pertussis by doctors.

To improve the rate of notifications by doctors the PHU intends to take the following actions in response to the findings:

- supply doctors with a sticker that lists notifiable conditions and includes the PHU's telephone number and a form with case definitions
- send notification forms and feedback from the survey to all doctors on the North Coast
- develop educational strategies with the Divisions of General Practice and supply articles for the Division's newsletters
- develop a protocol at the PHU, so that all notifications, including after-hours calls, are promptly answered and followed up
- provide training for hospital staff who receive notifications after hours.

ACKNOWLEDGMENTS

The authors wish to acknowledge all the doctors who participated in the survey, Dr John Beard, Director, North Coast Public Health Unit, Dr Christine Ahern, North Coast Public Health Unit, Mr Tim Sladden, North Coast Public Health Unit, Mr Geoff Sullivan, North Coast Public Health Unit, the Northern Rivers Division of General Practice.

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