

Paediatric surveillance: performance review and the primary care team

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SUMMARY. Primary care teams should state the aims of a preventive service and, through performance review, assess whether these aims have been achieved. The paediatric surveillance scheme in one practice is described, and the results of certain intermediate outcome measures are given.

Introduction

If primary health teams are to become more involved in preventive care, then they will need the ability to state the aims of any such activity and to measure whether these aims have also been achieved. The Court Committee¹ defined child health surveillance as:

1. Overseeing the health and physical growth of all children.
2. Monitoring the developmental progress of all children.
3. Providing advice and support to parents and treatment or referral of the child.
4. Providing a programme of effective infectious disease prophylaxis.
5. Participating in health education and training in parenthood.

Health surveillance is thus much more than a screening activity. The complex and wide-ranging nature of surveillance makes attainment of all the above aims difficult to measure without extensive research resources. Primary care workers who wish to review their effectiveness require simple methods such as the intermediate outcome measures suggested by a Royal College of General Practitioners Working Party in *Healthier children—thinking prevention*.² These include immunization rates and the proportion of children examined for developmental assessment, for squint, undescended testes and dislocated hips. Bax and colleagues achieved

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attendance rates exceeding 90 per cent for immunization and developmental screening at their study clinics in inner London; they also demonstrated a reduction of emotional, speech and language disorders in their study population compared with a control population.³ Other authors have demonstrated the feasibility of child health surveillance⁴⁻⁹ but its usefulness and place in general practice are still debated.^{10,11} Reasons for this include doubts about the reliability and validity of some screening methods,¹² and the difficulty of reaching the whole of a target population.^{13,14}

This paper describes the surveillance programme of one primary care team and reports the use of some intermediate outcome measures similar to those suggested by the RCGP Working Party.²

Patients and methods

There are about 590 children under the age of five years in our five-partner practice of 12,700 patients (4.6 per cent; national mean 3.4 per cent).¹⁵ The population served includes a high proportion of social classes I and II (Table 1).¹⁶ There are two attached health visitors (based in the converted Victorian practice building since 1968) while a clinical medical officer visits for one session per week. Two nurses are employed by

Table 1. Social class composition (Registrar-General's classification).

Social class	Parents of children born after 1978*		Heads of family in England and Wales† (percentage)
	Practice (percentage)	Leamington Spa postal district (percentage)	
I	16.2	8.9	4.9
II	32.0	19.5	19.8
III nonmanual	7.8	9.8	14.2
III manual	25.4	32.5	34.8
IV	11.3	19.6	18.6
V	1.6	5.3	7.7
Unclassified	5.4	5.6	—
Total	100	100	100

*Source: Warwickshire Child Health Computer.

†Source: *Social Trends* 1976; No. 6.

Table 2. Immunization rates as at mid-year 1983 (completed courses).

	Practice (percentage)	Leamington Spa postal district (percentage)
<i>Children born in 1981</i>		
Diphtheria/tetanus/polio	96.5	92.9
Pertussis	65.0	68.6
Measles	82.5	74.9
<i>Children born in 1982</i>		
Diphtheria/tetanus/polio	64.0	57.5
Pertussis	54.5	48.8

the practice as well as a social worker who is attached part-time. There is also a part-time clerk typist employed by the health authority for the surveillance programme.

The practice nurses carry out over 90 per cent of the childhood immunizations. Administrative functions, including notification of immunization appointments, have been done through the Warwickshire Child Health Computer Scheme since 1978; this scheme is currently being extended for recording of developmental examinations.

Since 1974, developmental examination has been offered to all the practice children at the ages recommended in Warwickshire, namely: at birth (by doctor, usually the paediatric senior house officer); 6 weeks (by doctor—general practitioner or clinical medical officer); 9 months (by doctor and health visitor); 18 months (by health visitor); 2½ years (by doctor and health visitor); 3 years (by health visitor); and 4 years (by health visitor).

The Sheridan Stycar sequences are used for developmental testing.^{17,18} The health visitors carry out most of their examinations in the home, while the two doctors (general practitioner and clinical medical officer) see patients by appointment at the surgery. They allocate between 10 and 20 minutes for the physical and developmental examination of each child. Two sessions, occupying about three-and-a-half hours, are held each week separate from the open well-child clinic conducted by the health visitors. Many children are, of course, seen at other stages in order to discuss known or suspected problems, or simply at the parents' request.

As well as the informal discussions between doctors, health visitors, and sometimes the social worker, after these clinics, more formal meetings are held every few months with the whole clinical team. At these meetings the current immunization rates and the outcome of developmental screening are discussed and preventive policies agreed.

We undertook a review of the intermediate outcome measures suggested in *Healthier children—thinking prevention*,² using a 10 per cent sample of preschool records. During July 1983, we examined every tenth record in the alphabetical file maintained by the health visitors and also the corresponding medical record envelope.

Results

The immunization rates summarized in Table 2 show that most of the practice children receive their immunizations close to the recommended ages. The rates for other children in the locality are initially lower—that is, these children may receive their immunizations several months after the recommended time. Even the less satisfactory rates of immunization are between 10 and

Table 3. Number of referrals from surveillance programme by speciality or service.

	Two years 1.4.78 to 31.3.80	Three years 1.4.80 to 31.3.83
Ophthalmology	25	42
Speech therapy	19	51
Audiology	9	45
ENT department	14	31
Paediatric outpatients department	12	22
Other	11	16
Total	90	207

Table 4. Comparison of results from two periods of the surveillance programme.

Number of children referred	80	159
Number of examinations	1,265	2,356
Percentage of examinations referred	7.1	8.8
Percentage of preschool age group referred	13.6	26.9

20 per cent higher than the latest national figures available.¹⁴

Between April 1978 and March 1983, 3,621 developmental examinations were performed. Less than 10 per cent of children failed to attend the appointment made for them. Only 21 children have failed to attend despite repeated invitations; all of these children had been examined at earlier ages, and they were all followed up by the health visitors. The 297 referrals arranged for 239 children are detailed in Table 3.

Overall, 8 per cent of the preschool population is referred per annum as a result of the surveillance programme. When the period 1978-80 is compared with the period 1980-83, there is an increase in referrals (Tables 3 and 4), but the proportion known subsequently to have received specific treatment fell from 54 to 40 per cent. There were marked increases in referrals to audiology and speech therapy services. We believe that this was due to a real alteration in referral policy, largely initiated by the clinical medical officer (S.H.). The team now refers earlier than before any child with significant speech and language problems, and also in each case arranges a more detailed examination of hearing. Over the five years, 13 children have received comprehensive assessment at the district Child Development Centre.

In the 10 per cent sample of records described above, 54 out of 56 children had been examined—at or near all the prescribed ages—for developmental progress, and for squint, hip stability and testicular descent. The health visitors' records included centile charts in 39 per cent of cases, but in 80 per cent of those children born

after 1 July 1981. Brief details of developmental findings have been entered in 84 per cent of these children's medical record envelopes; this was also more likely to be the case with the more recent births.

We also welcome the contribution which a social worker can make to the team's efforts, especially in the prevention of child abuse. From a separate study by the Warwickshire Social Services Department, cases dealt with by the attached social worker resulted less often in case conferences and long-term casework in contrast to the cases dealt with by the area team as a whole; 0.85 per 1,000 population compared with 2.13 per 1,000 population (unpublished findings, 1982).

Discussion

The five areas described by the Court Committee¹ show that the child health surveillance is a complex activity. Data such as the intermediate outcome figures presented above will only provide some of the answers about effectiveness of the care provided.

It is particularly important in child health surveillance to achieve almost complete coverage of a target population, as there have been reports of a high prevalence of disorders in nonattending children.^{9,13} Our own attendance rates for developmental examinations (99.4 per cent) show that this aim can be achieved in general practice, while there is room for further improvement in immunization rates. These satisfactory intermediate outcome measures are, in our view, due to several factors. First, the population served is relatively middle-class (Table 1), geographically stable and without extreme travelling difficulties, although there are also considerable local problems of urban deprivation. Attendance rates of 97 per cent have been reported for Guildford, 69 per cent for Rochdale, 73 per cent for Livingston New Town and 59 per cent for Glasgow.^{4-7,14} Such demographic factors will obviously vary between these areas. Curtis Jenkins and colleagues⁹ achieved 100 per cent attendance in Middlesex, and we would agree that assiduous follow-up of nonattenders by health visitors, with specific clerical assistance, plays an important role; our referral rate of 8 per cent per annum for the preschool population is close to the figure of 7.8 per cent given by these authors. Differences in denominators make comparison difficult but the referral rates from other general practice studies appear to be similar. We believe that the Warwickshire Child Health Computer Scheme, with its notification and reminders to parents, and then to doctors and health visitors, has helped to improve the immunization rates.

We would agree with Bax and his colleagues that the opportunity to discuss emotional and social problems is important to mothers and encourages them to attend.³ The lower rate of case conferences about our patients is consistent with the view that paediatric surveillance may help to prevent child abuse, although the same social factors which influence rates may be relevant.¹⁹

As regards the functioning of the primary care team, we are fortunate in having colleagues who are committed to health promotion and the prevention of disease. We have, for instance, achieved a consensus regarding contraindications to immunization. The clinical medical officer finds that her close contact with general practitioners facilitates treatment and referral, and also prevents professional isolation. From her, the practitioners gain much in preventive orientation and expertise in child health; they gain similarly from close work with health visitors. Support from community physicians and managers in the nursing and social services is also important for the surveillance scheme to function well.

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