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Collecting data in general practice: need for standardisation

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The variety of practice annual reports that have appeared since 1970[1,2] demonstrates that decisions about which data are best collected to assess the quality of patient care and for forward planning are usually left to individual practices to determine.

Subjects, methods, and results

To examine existing data collection and views about feedback we sent a postal questionnaire for self completion to all singlehanded practices, all fundholding practices, and all non-fundholding practices with over five partners, plus a one in three random sample of all other non-fundholding practices in the Northern region in September 1993 (n=211). The response rate was 79%.

Respondents spent substantial amounts of time entering data into computer systems or manual records each month (see table). In computerised practices, deciding on a standardised coding system and ensuring that team members consistently entered data caused problems.

Levels of recording of outpatient referrals and attendances at accident and emergency departments were high though low on diagnostic details. Chiropody, physiotherapy, and alcohol-drug counselling referrals were recorded by fewer respondents, as were social service referrals. Collection of data about surgery consultations, domiciliary visits, and night visits by general practitioners were high (all over 90%), but telephone consultations were recorded at lower levels. Recording of practice nurse surgeries was high, but nurse telephone consultations and home visits were recorded at under half the rate for general practitioners. Immunisations, vaccinations, cervical cytology, births, and deaths were recorded at extremely high levels. Least recorded data were for socioeconomic details of patients.

Satisfaction with the current feedback from family health services authorities was high (172, 70%) and 154 (62%) practices were prepared to standardise their data collection; the main concern about standardisation related to the time and cost. The main preferences for feedback of data were by individual practice (137) and by whole family health services authority (111). Over half the respondents (143) were in favour of using "spotter" practices to collect data from primary health care teams.

Mean, standard deviation, and 95% confidence intervals for the estimated amount of time spent in hours each month recording data by respondents, grouped by practice status and practice's views on methods of collecting/ reporting data

Time	Practices	Mean time spent (h)	Standard deviation	95% Confidence interval	Missing
Large practice	7	217	141	87 to 348	2
Fundholder	43	227	162	178 to 277	11
Non-fundholder	83	112	92	92 to 133	9
Single handed	78	53	55	40 to 60	14
All practices	211	118	121	101 to 134	36

Comment

Extrapolating our data to all England and Wales suggests that about 1 230 000 hours are being spent every month in collecting data in general practice. Considerable duplication of data collection by other bodies exists—for example, for referrals, accident and emergency attendances, and item of service statistics. Historically, general practices have answered to the rest of the health service for what they do, recently through the ill perceived annual reports.[3] Data collection has been focused more on meeting administrative demands from outside. Despite high cost computerisation, there is little vision about which data should be recorded, how to use it, how it can best inform practices in their activities, and how it should be standardised.

Telecommunications could lead to fast and effective transfer of large amounts of data over wide area networks on an unprecedented scale. For this to be successful, however, data collection needs to have more focus, agreed standards, and consistent cross mapping so that it can eventually provide data for health resource planning and public health and epidemiological uses. This would also reduce general

practice workloads—at present questionnaires are sent to practices because there is no other way of getting this information. Data collection in primary health care is clearly crucial to use fully the personal knowledge that teams derive from extended day to day contact with patients.[4] The potential of large computer databases in general practice has yet to be realised.[5] Standardised software systems, such as Scotland's GPASS, are one way forward, but until standards of data integrity and format are agreed nationally there seems little likelihood of realising the full potential of data collection in primary care and ending costly duplication.

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Continuing increase in respiratory symptoms and atopy in Aberdeen schoolchildren

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The prevalence of childhood asthma seems to be increasing,[1] although at least part of the reported increase may reflect previous underdiagnosis. In an earlier paper we described the increase in respiratory symptoms and diagnosed atopy that occurred in Aberdeen schoolchildren during the 25 years to 1989.[2]

Subjects, methods, and results

In May 1994, through the schools, we distributed questionnaires with an explanatory letter to the parents or guardians of the 4197 children attending primary clases 5, 6, and 7 in each of the 34 schools lying within the boundaries of the city of Aberdeen as they existed in 1964 and which had also provided the population base for the 1964 and 1989 studies. The questionnaire included items on respiratory symptoms (wheeze, shortness of breath, night cough) and diagnoses of atopy (asthma, eczema, and hay fever). The questionnaires were collected at the end of the week in which they were distributed, and a repeat questionnaire was issued to non-responders, again through the class teacher. A third questionnaire was sent to those parents who failed to respond to the first reminder, this time by post. Our protocol, including the questions and the explanatory letter, was identical to that followed in 1989, except that the questionnaires were printed on green rather than white card.

A total of 4034 (96·1%) questionnaires were returned, relating to 2013 boys and 2021 girls, 3770 (89·8%) with no reminder, 177 (4·2%) after the first reminder, and 87 (2·1%) after the postal reminder. There were no significant differences between the responses to the questionnaire in these three groups, and the results presented are based on the total population of 4034 responders.

The mean (SD) age of the children was 10·6 (0·89) years (range 8·5 to 13·9). There were significant rises in the prevalence of wheeze, attacks of wheeze occurring more often than three monthly, attacks of shortness of breath in the past year, attacks of shortness of breath occurring six or more times in the past year, and of persistent night cough (table). The proportion of children with a reported diagnosis of asthma roughly doubled between 1989 and 1994, with a smaller increase for eczema and no change for hay fever.

Changes in the prevalence of respiratory symptoms and diagnoses of atopic disorders 1989-94

	1989 (n=3403) No (%)	1994 (n=4034) No (%)	Relative risk (95% confidence interval)
Wheeze in past three years	675 (19·8)	1025 (25·4)	1·28 (1·18 to 1·40)
Wheeze more often than three monthly	206 (6·1)	383 (9·5)	1·52 (1·29 to 1·79)
Attacks of shortness of breath	341 (10·1)	753 (18·7)	1·89 (1·68 to 2·13)
Six or more attacks of shortness of breath in past year	122 (3·6)	250 (6·2)	1·73 (1·40 to 2·14)
Night cough	175 (14·0)	1288 (31·9)	2·29 (2·08 to 2·51)
Reported diagnosis of asthma	347 (10·2)	789 (19·6)	1·92 (1·71 to 2·16)
Reported diagnosis of eczema	409 (12·0)	714 (17·7)	1·47 (1·32 to 1·65)
Reported diagnosis of hay fever	405 (11·9)	511 (12·7)	1·06 (0·94 to 1·20)

Comment

After a detailed review of published reports, Anderson suggested that the prevalence of wheezing illness might have reached a plateau in the mid-1980s.[3] Our study, performed on children in the same classes of the same schools during the same month as the 1989 study, suggests that, at least in Aberdeen, the prevalence of childhood wheezing illness is still increasing. Increased professional and public awareness of asthma might be responsible for some or even all of the increased diagnosis of asthma but is unlikely to explain the increase in reported symptoms; not only is the prevalence of wheeze increasing, but its apparent severity is also increasing, with more children experiencing more frequent attacks of wheeze and shortness of breath.

This study was not designed to elucidate possible causes for these changes, which remain the subject of speculation. Having previously shown a high prevalence of wheezing illness among schoolchildren in the Highlands of Scotland,[4] we find it difficult to believe that outdoor air pollution is a major factor in initiating the asthmatic state; we are inclined to support alternative hypotheses, such as dietary deficiency of antioxidants,[5] or changes in indoor environment or life style. The frequency with which eczema is diagnosed has also risen, and we continue to believe that any explanation for the increasing prevalence of asthma should also explain the increasing prevalence of other atopic disorders.[2]

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