

Primary paediatric practice in industrial and rural Britain

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Based on the hypotheses that the health needs of children in Britain:

- (1) vary from community to community,
- (2) are disproportionately more demanding of resources in areas of high population density than in rural areas,

paediatric practice in a sample of general practitioners was examined to determine if there is a parallel concentration of paediatric interest and resources among practitioners in areas of high population density.

Hypotheses

The hypotheses are suggested by the striking variations to be seen in infant mortality rates from region to region and area to area within Britain (Howe, 1972). Such rates, as Tudor Hart (1972) has remarked, are "still a good measure of community health". They are highest in the industrial areas—of South Wales, North-east and North-west England, South-west Scotland, and the Belfast area of Ulster; and low, by comparison, in the urban and rural areas of South-east and South-west England.

The hypotheses are also suggested by the known census variation in the distribution of socioeconomic groups between area and area*, and the correlations of such groups with some aspects of child health.

Correlations of socioeconomic group with child health

Here, caution is necessary.

- (1) ***Perinatal mortality.*** In Britain the associations between socioeconomic group and perinatal mortality are well documented. Butler and Bonham, for example, showed that: the incidence of perinatal problems was highest in social classes IV and V, that the incidence both of prematurity and of mortality in premature babies rose with falling social class status, and that with declining social class the incidence of babies weighing less than 2,500 grams falls, and the mortality among them rises.

Illsley and Kincaid (1963) point out that indeed ever since information on the occupation of the father became available in 1911 strong social-class differentials have been evident in neonatal and postneonatal deaths, and that, while the total infant mortality rate has fallen dramatically (110 per thousand live births in 1911–15 to 18·1 in 1968), *the differentials have remained.*

- (2) ***Child development.*** It is generally suggested that children in higher social classes do relatively well in developmental tests—though Neligan (1969) has reported the reverse finding in the achievement of independent walking. The predictive significance of many such tests, however, has yet to be fully assessed.
- (3) ***Childhood diseases.*** Contrary to popular belief there are only a few childhood diseases which have been shown to be correlated with social class. The Newcastle 1,000 families study (Miller *et al.*, 1960) showed such correlations only in enuresis, bronchitis/pneumonia, stomatitis, and non-infective convulsions and commented: "The social correlations of disease are very complex and vary in detail from one disease to another. It is never wise to rely upon a single social index such as social class".
- (4) ***Parental care.*** Of the impact of social class on maternal capacity and parental care precisely the same might be said, but at least some of the hazards are well documented. In social classes IV and V, for example, pregnancies follow in quicker succession; the first

*See Census 1961. Socioeconomic Group Tables (Distribution of socioeconomic groups by Rural Areas, and by Urban Areas with populations of 100,000 or more) H.M.S.O. (1966).

child is born at an earlier average maternal age; more mothers go on to have more than four children, and there is a higher illegitimate birth rate, than in social classes I and II.

The hypotheses are thus supported by the evidence available, but they will only be proved, and their practical implications become evident, when there is adequate machinery available to monitor morbidity amongst children, at regional and community levels.

Patterns of paediatric care

Paediatric patterns in industrial and rural general practice

If the health needs of children in Britain are more demanding in areas of high population density than in rural areas, is there any parallel distribution of paediatric resources amongst general practitioners?

Method

In 1968, a postal questionnaire was sent to a sample of 658 general practitioners in partnership or group practice.

This was not a statistically random sample, but was drawn from the population of general practitioners in partnership listed in the current *Medical Directory* using a specified position on specified pages of the *Directory*.

It was thought desirable to avoid inclusion of more than one partner from any one practice. Wherever the sampling provided a second member of one practice, therefore, the latter was rejected and the following practitioner's name was taken. Participants were afterwards identified by code number.

The statistical limitations of the sampling are recognised; as are also the problems created by non-replies. The objective of the survey, however, was to look for trends, not to quantify them precisely. The questionnaire was concerned with aspects of primary care, and some of the findings have already been published (Wright, 1969; MacKeith, 1969). The practitioners were asked to categorise their practices as 'rural', 'urban residential', 'industrial', or 'mixed' and, in the latter case, to specify briefly the practice's character.

Findings

Replies were received from 456 general practitioners (70 per cent), and comparisons between city and country are summarised in the tables below.

TABLE 1
SURVEY POPULATION

| | |
|---|--------------------|
| Number of practitioners circulated | 658 |
| Number of practitioners responding | 456 (=70 per cent) |
| Of these: | |
| 77 described their practice as industrial (I) | |
| 43 as industrial and urban (I+U) | |
| 63 as rural (R) | |
| 75 as rural and urban (R+U) | |

TABLE 2
PRACTITIONERS' PERSONAL LIST SIZE

| Type of practice | Industrial | | | Rural | | |
|-------------------------|------------|-----|------------------|-------|-----|------------------|
| | I | I+U | % of total group | R | R+U | % of total group |
| Number of practitioners | 77 | 43 | | 63 | 75 | |
| 3,000 or more | 35 | 26 | 51 | 9 | 23 | 23 |
| 2,500-2,999 | 21 | 11 | 26 | 13 | 19 | 23 |
| 2,000-2,499 | 18 | 6 | 20 | 20 | 25 | 32 |
| 1,500-1,999 | 0 | 0 | 0 | 16 | 5 | 15 |
| 1,000-1,499 | 3 | 0 | 3 | 4 | 3 | 5 |
| Less than 1,000 | 0 | 0 | 0 | 1 | 0 | 0.7 |

Significant $\chi^2=27.8$. $P<.001$.

TABLE 5
PROFESSIONAL RELATIONSHIPS WITH HEALTH VISITORS

| Type of practice | Industrial | | | Rural | | | |
|---------------------------|------------|-----|------------------|-------|-----|------------------|----|
| | I | I+U | % of total group | R | R+U | % of total group | |
| Number of practitioners | 77 | 43 | | 63 | 75 | | |
| (a) Frequency of meetings | 1 | 25 | 11 | 30 | 32 | 35 | 48 |
| | 2 | 13 | 10 | 19 | 16 | 17 | 24 |
| | 3 | 37 | 22 | 50 | 15 | 23 | 27 |
| Unspecified | | 2 | 0 | 0 | 0 | 0 | |
| (b) Reported helpfulness | 1 | 10 | 10 | 17 | 18 | 24 | 30 |
| | 2 | 34 | 17 | 42.5 | 19 | 28 | 34 |
| | 3 | 25 | 11 | 30 | 18 | 19 | 26 |
| | 4 | 8 | 4 | 10 | 7 | 4 | 8 |
| Unspecified | | 0 | 1 | 1 | 0 | 0 | |

(a) Significant $\chi^2=14.18$. $P<.001$. (b) Not significant.

TABLE 6
WELL-BABY CLINICS

| Type of practice | Industrial | | | Rural | | |
|-------------------------|------------|-----|------------------|-------|-----|------------------|
| | I | I+U | % of total group | R | R+U | % of total group |
| Number of practitioners | 77 | 43 | | 63 | 75 | |
| Yes | 18 | 9 | 22.5 | 11 | 19 | 21.5 |
| No | 59 | 34 | 77.5 | 51 | 56 | 78 |
| Unspecified | 0 | 0 | | 1 | 0 | |

TABLE 7
ATTACHED LOCAL AUTHORITY STAFF

| Type of practice | Industrial | | | Rural | | |
|-------------------------|------------|-----|------------------|-------|-----|------------------|
| | I | I+U | % of total group | R | R+U | % of total group |
| Number of practitioners | 77 | 43 | | 63 | 75 | |
| District nurse | 1 | 4 | 4 | 2 | 3 | 3.5 |
| Midwife | 4 | 2 | 5 | 0 | 1 | 0.7 |
| Health visitor | 8 | 7 | 31 | 6 | 7 | 40 |
| Multiple(a) inc HV | 15 | 7 | | 22 | 20 | |
| (b) not inc HV | 3 | 1 | 3 | 3 | 7 | 7 |
| Nil | 38 | 20 | 48 | 26 | 33 | 43 |
| Not specified | 8 | 2 | 8.5 | 4 | 4 | 6 |

Thus, the pattern of attachment was very similar in the two major groups. Furthermore, of those practices which had a health visitor attached the proportion conducting their own well-baby clinics was identical in industrial and rural groups (35 per cent and 34.5 per cent respectively).

(e) Attitude to supervisory care of children

Under ideal conditions (defined as you please) would you regard the regular routine review of 0-5-year-olds as a legitimate part of general practice?

TABLE 8
SUPERVISION OF CHILDREN

| Type of practice | Industrial | | | Rural | | |
|-------------------------|------------|-----|------------------|-------|-----|------------------|
| | I | I+U | % of total group | R | R+U | % of total group |
| Number of practitioners | 77 | 43 | | 63 | 75 | |
| Yes | 34 | 21 | 46 | 36 | 41 | 55 |
| No | 39 | 19 | 48 | 25 | 25 | 36 |
| Unspecified | 4 | 3 | 6 | 2 | 9 | 8 |

Not significant $\chi^2=2.74$. $P<0.1$.

TABLE 9
PRACTITIONERS' INVOLVEMENT IN LOCAL AUTHORITY SERVICES

| Type of practice | Industrial | | | Rural | | |
|---------------------------|------------|-----|------------------|-------|-----|------------------|
| | I | I+U | % of total group | R | R+U | % of total group |
| Number of practitioners | 77 | 43 | | 63 | 75 | |
| School medical service | 1 | 1 | 1.7 | 5 | 5 | 7 |
| LHA child welfare clinics | 4 | 6 | 8.3 | 12 | 10 | 13 |
| No involvement | 69 | 35 | 86 | 46 | 59 | 75 |
| Unspecified | 3 | 1 | | 0 | 1 | |

TABLE 10
PRACTITIONERS' EDUCATIONAL EXPERIENCE IN PAEDIATRICS

| Type of practice: | (a) Industrial | | (b) Rural | | % total of group | |
|--|----------------|-----|-----------|-----|------------------|------|
| | I | I+U | R | R+U | (a) | (b) |
| Number of practitioners | 77 | 43 | 63 | 75 | 120 | 138 |
| Student clerkship: | | | | | | |
| (a) Only | 16 | 7 | 17 | 17 | } 41 | } 50 |
| (b) Combined with postgraduate appointment | 18 | 8 | 15 | 20 | | |
| Part-time paediatric house physician | 14 | 6 | 22 | 23 | 16 | 33 |
| Full-time paediatric house physician | 21 | 10 | 19 | 18 | 25 | 20 |
| Paediatric registrarship | 4 | 2 | 3 | 3 | 5 | 4 |
| Clinical assistantship in paediatrics | 1 | 3 | 0 | 0 | 3 | 0 |
| No formal training | 27 | 16 | 8 | 15 | 36 | 16 |

Proportions with no formal training are highly significant $\chi^2=11.3$. $P<0.002$.

Discussion

1. Tudor Hart's 'inverse care law' suggested that "the availability of good medical care tends to vary inversely with the need of the population served" in economic terms. Certainly these findings do not refute that view; nor suggest any concentration of general-practitioner paediatric resources in industrial communities to parallel the expected greater need.

In contrast, indeed, they suggest that among rural practitioners there is a bigger proportion who have had some formal paediatric education than among industrial practitioners: and the rural practice is characterised by small list size, a less impersonal approach to immunisation, and a more frequent contact with health visitors.

2. It is noteworthy that in both city and country the proportion of practitioners organising their own well-baby clinics increased steeply from 22 per cent (table 6) to 35 per cent when a health visitor is attached.

2. At present the distribution of both needs and resources in primary paediatric practice can only be roughly estimated. The government 'grey paper' (1972) on *Reorganisation in the National Health Service* lays great emphasis on the improved monitoring of needs, resources, and effectiveness at district and area level—recommending the creation of research and planning groups at district and area levels. More adequate monitoring will certainly need to be achieved if primary health care of children is to be improved; and resources more closely tailored to needs.

Summary

Two hypotheses about the health needs of children were considered: that needs vary from community to community and that proportionately more resources are needed in urban areas. No concentration of general-practitioner skills was found in urban areas and some evidence of relatively more interest in paediatric care in rural areas is reported.

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BECLOMETHASONE DIPROPIONATE STEROID AEROSOL IN THE TREATMENT OF PERENNIAL ALLERGIC ASTHMA IN CHILDREN

Thirty-one chronic perennial asthmatics aged from 2½ to 16 years were treated with beclomethasone dipropionate pressurised aerosols for up to 20 months. Of these, 16 patients dependent on oral corticosteroid or corticotrophin for up to 11 years were successfully transferred to this treatment, with one exception. Steroid withdrawal-symptoms were slight. Loss of weight, disappearance of Cushingoid features, and resumption of growth indicated lack of systematic side-effects. Fifteen others, inadequately controlled on bronchodilators or disodium cromoglycate, were also effectively treated, and no clinical evidence of adrenal suppression was noted.

REFERENCE

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