Should children with minor medical problems be sent to hospital?
A study of infant care practices within families

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SUMMARY
The admission of children to hospital for minor medical problems is frequently influenced by family and social circumstances. This study compared the infant care practices of families of children admitted to hospital for gastroenteritis (n = 76) and families caring for children with gastroenteritis at home (n = 76). Mothers of children who were admitted to hospital were more likely to use medical sources of advice on parenting and less likely to use other non-family sources than home care mothers. They also received less support in the education/entertainment of their children from fathers. There were many similarities between the two groups, including the high level of behaviour problems of the children and the relatively low level of involvement of fathers in child care tasks. Both of these factors serve to increase stress on mothers to the point where they may be unable to cope with a sick child at home.

INTRODUCTION
Parenting is a life skill for which there is no training and few resources for advice and guidance. Parenting styles show considerable continuity throughout childhood and indeed the effects of parenting in one generation are clearly carried on to the next generation. This overrides the impact of other influences such as material disadvantage or different family structures. Some factors, such as high levels of stressful life events, have been shown to distract parents from taking care of their children. In the health area, parents certainly influence the development of behaviour patterns in their children, for instance in areas such as nutrition and exercise, which are important in terms of current health and ultimate longevity. In illness, indifferent parenting styles are associated with less well controlled childhood disease.

There is increasing discussion of the asymmetry of modern family arrangements in relation to the family work role. Research suggests that women still shoulder almost all of the housework burden in families, regardless of their own job duties.

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involvement. While child centred tasks are shared more often than household tasks, households with young children are particularly asymmetrical in their overall division of household tasks.

An Irish study found little difference between groups of single and married mothers on a range of demographic, psychosocial and child development indices, but found that the sub-group of single mothers who lived alone were especially vulnerable to problems.

One area in which non-medical factors such as parenting skills may influence disease incidence and management is that of infantile gastroenteritis. A recent study compared a group of children managed at home and a group managed in hospital for childhood gastroenteritis in the light of clinical concerns about the large number of admissions to hospital of children with this complaint for non-medical reasons. No differences were expected in terms of medical severity of the gastroenteritis. In the larger study, blind ratings by doctors specialising in gastroenteritis clearly showed that there were no such differences between hospital-managed and home care groups. An explanation was sought by examining social and family factors, as home care management of gastroenteritis may be associated with better parenting skills. Identification of differences in parenting between the two groups could provide a focus for the development of preventive strategies with young parents.

**METHODS**

**Sample:** The families of a group of 152 children under two years of age from an urban geographical region were interviewed about a recent childhood illness (gastroenteritis). The region was West Dublin; an area of approximately 300 square miles as defined by county boundaries to the west and by city postal districts to the east. A diagnosis of gastroenteritis by the doctor concerned was taken as the medical inclusion criterion. All children who had been admitted to the region's infectious diseases hospital with gastroenteritis in the first quarter of 1987 were identified from hospital records (n = 78). An equal number of families who were known to have had a child with gastroenteritis in the same period but who had not been admitted to hospital were identified by contact with general practitioners and hospital casualty departments. General practitioners were interviewed for another part of the study, and were asked to provide their most recent case of childhood gastroenteritis which was managed at home. Casualty department records in the city's two largest paediatric hospitals were examined for gastroenteritis attendances which were managed at home in the same region and time period. Approaches to families resulted in a 97% response rate.

**Procedure:** Questions were asked on a number of aspects of parenting, including prior experience and knowledge, sources of advice, parenting skills management and the role division between mother and father. It was agreed that home care for childhood gastroenteritis, as for any other minor childhood illness, was best.

**Statistics:** The statistical procedures used were chi-square analysis for categorical variables group comparison, one-tailed t-test analysis for interval variables group comparisons and Pearson correlation analysis for interval variable examination of sample characteristics.
RESULTS

On comparison with the census figures for 1981,15 two-parent families with more than one child were under-represented in the overall sample (home sample: 58%; hospital sample: 58%; census proportion: 70%, p < 0.02). Two-parent families with only one child were slightly over-represented in the home care but not in the hospital care sample (home care: 32%; hospital care: 25%; census proportion: 23%, p < 0.06). Single parent families constituted 9% of the cases seen in the home sample and 14% in the hospital sample, in comparison to 3% of all families in the area (p < 0.001). There were no significant differences in the numbers of children in single parent families in the home and hospital samples.

Prior experience of different facets of parenting are shown in Table I. Levels of experience with young children are significantly higher for the hospital care mothers, the reverse holding for pre-natal class attendance and reading on babycare. Women with more experience of young children are more likely to be younger (r = −0.28, p = 0.01), to be less well educated (r = −0.25, p = 0.03) and to have husbands of lower occupational status (r = 0.21, p = 0.05).

| Mother's experience       | Hospital care % | Home care % | p  |
|---------------------------|-----------------|-------------|----|
| Caring for young children | 88              | 75          | < 0.05 |
| Reading about child care  | 50              | 80          | < 0.05 |
| Pre-natal class attendance| 36              | 63          | < 0.01 |

There was no difference between hospital care and home care mothers in knowledge of aspects of child care when tested by a series of statements and asked to indicate “true” or “false” — such as “a baby needs to be more warmly dressed than an adult”, “if a baby is fat you know it is healthy”, or “some babies spit up all their feeds”.

Families were the main source of parenting advice for both groups of mothers. Medical sources were more evident for hospital care mothers (12% versus 3%, p < 0.05), and non-family contact less evident (14% versus 55%, p < 0.001). Nine percent of hospital and six percent of home care mothers had no source of parenting advice.

Involvement in child care tasks by mothers and fathers is shown in Table II. Most of the child care was provided by mothers, although there was some paternal involvement in all the tasks mentioned. Fathers were most involved in the play activity of their children. Differences in the involvement in child care tasks existed for only two of the eleven dimensions for mothers. Home care fathers took their children outdoors significantly more often. Both mothers and fathers of children who were cared for at home were more likely to read to their children, (p = 0.08) for mothers and p = 0.12 for fathers). Combining the number of times children were taken outdoors, read to and played with into an index of “child socialisation”, © The Ulster Medical Society, 1991.
home care children were significantly more socialised than hospital care children (15.3 versus 12.7 episodes of such socialisation in a week, \( p = 0.004 \)). The overall involvement in child care tasks of mothers was similar across the groups, (average 74% for mothers and 20% for fathers).

**Table II**

*Involvement in child care tasks by mothers and fathers*

| Tasks                        | Mothers Hospital care | Mothers Home care | Fathers Hospital care | Fathers Home care |
|------------------------------|-----------------------|-------------------|-----------------------|------------------|
| No. of days involved weekly: |                       |                   |                       |                  |
| getting child up in morning  | 5.7                   | 5.9               | 1.1                   | 1.0              |
| dressing child               | 5.4                   | 6.1*              | 1.2                   | 0.9              |
| preparing child’s food       | 5.6                   | 5.8               | 0.9                   | 1.0              |
| feeding child                | 4.8                   | 5.5*              | 1.4                   | 1.4              |
| changing nappies             | 5.5                   | 5.4               | 0.9                   | 1.3              |
| putting child to bed         | 4.9                   | 4.8               | 1.4                   | 1.6              |
| No. of times weekly:         |                       |                   |                       |                  |
| bathing child                | 4.8                   | 4.2               | 0.4                   | 0.6              |
| playing games                | 3.0                   | 3.4               | 2.1                   | 2.6              |
| taking child outdoors        | 3.0                   | 3.2               | 1.2                   | 1.7              |
| reading to child             | 1.3                   | 1.7               | 0.8                   | 1.2              |
| babysitting without mother   | N/A                   | N/A               | 1.1                   | 0.8              |
| taking up crying child at night | 2.6                  | 2.0               | 0.7                   | 0.6              |

\( N = 152; \) one-tailed \( t \)-test analysis.

* \( p < 0.05 \) (comparisons between mothers and between fathers).

**DISCUSSION**

In dealing with the problem of infantile gastroenteritis, parental inexperience (leading to anxiety and caution, yet an overall willingness and perceived ability to manage at home) may explain the greater preponderance of families with only one child whose children were cared for at home. It is likely that anything that undermines the family system will cause stress and reduce coping ability. A reduced level of paternal involvement with children may increase the burden on the mother and make her less capable of coping with an ill child. There is no need for fathers to become more involved in the management and care of their children.

Very few of the children in this study were re-admitted to hospital on a second occasion. It would appear that families learn, in hospital, about the management of gastroenteritis. Mothers expressed more confidence in the future management of a gastroenteritis episode following their child’s stay in hospital. This suggests that a preventive educational strategy by general practitioners, public health nurses or health visitors might reduce hospital admissions. The impact of investment in families at preventative level has been outlined by Reif who used family

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education as the investment domain and childhood hospitalisation as a measure of the impact of preventive spending.\textsuperscript{16} For families in Jerusalem he showed that a third year at secondary school for at least one parent was associated with an average decline of 1.3 hospital days per infant per year.

The present study confirms that considerable stress is involved in rearing children, and that significant numbers of children have behaviour problems. This may explain the high rates of psychiatric illness and disturbance in mothers, as demonstrated by Brown and Harris,\textsuperscript{17} a situation probably aggravated by the asymmetry of parental relationships with the children. Health education in the management of a particular illness such as gastroenteritis might reduce the number of children admitted to hospital which would be beneficial both in financial terms and in terms of the psychological well-being of the child. In the broader situation, more symmetrical sharing of child care by both parents might reduce stress on the mother and increase her coping ability in the management of a common childhood illness such as gastroenteritis.

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