Injury prevention training: is it effective

P. Marsh and D. Kendrick

Abstract

The aim of this controlled follow-up study was to assess the effectiveness of a multi-disciplinary training programme in increasing knowledge, changing attitudes and practice in injury prevention amongst primary health care professionals. All primary health care team members in Nottinghamshire were invited to participate in the training programme. Thirty-one health visitors, 11 general practitioners and 16 practice nurses attended the training programme, and completed the study questionnaire 3-4 months before and after the training. A comparison was made with a professional of the same status, who had not attended the training session who had also completed both questionnaires, and who was matched with a trained participant on the basis of pre-training attitude and knowledge scores (to within 1 point of each score). A significant increase in the number of individuals answering correctly to questions on accidental injury epidemiology was demonstrated in the trained group (Wilcoxon matched-pairs signed rank, health visitors \( P = 0.002 \), practice nurses \( P = 0.0004 \), general practitioners \( P = 0.02 \)), but no significant change was demonstrated in the control group. Changes in attitude scores were only significant for the practice nurses (Wilcoxon matched-pairs signed rank, \( P = 0.01 \)). Increases were also demonstrated in the frequency of health visitors identifying hazards on home visits and discussing them with parents (\( \chi^2 = 6.19, \text{d.f.} = 2, P = 0.04 \)) and in the number of health visitors who, on receiving notification of a child attending the A&E department following an injury, carried out a home visit to discuss injury prevention (\( \chi^2 = 9.19, \text{d.f.} = 2, P = 0.01 \)). The number of general practitioners displaying posters in the surgery waiting rooms also increased significantly (\( \chi^2 = 9.21, \text{d.f.} = 2, P = 0.002 \)). The number of contacts with representatives of other agencies and individuals concerning child safety significantly increased in the trained group (Wilcoxon matched-pairs, \( P = 0.02 \)). We conclude that education and training with regard to injury prevention was effective in increasing knowledge and some injury prevention practices. Although training did not appear to change the attitudes of health visitors and general practitioners to a significant extent, a marked change was unlikely due to high baseline attitude scores.

Introduction

Childhood unintentional injuries are a preventable health problem (CAPT, 1989), yet still remain a common cause of mortality and morbidity in children aged over 1 year (DTI, 1989, 1995; OPCS, 1992). In any given year, one in every five children sustains an injury that requires medical attention (Sibert et al., 1981) and in 1992 approximately 643 children in England and Wales died as a result of an unintentional injury (OPCS, 1992). Injury
prevention has emerged as an important focus of recent government policy with the publication of *The Health of the Nation* strategy (DoH, 1992) which seeks to achieve a 33% reduction in child accidental injury mortality by the year 2005. Part of the government strategy is to utilize primary health care professionals to promote, educate and facilitate change in this key priority area.

Many features of general practice make it suitable for preventative activities. Frequent contacts occur between primary health care team (PHCT) members, parents and children which provide appropriate opportunities for prevention work. For example, home visits carried out by health visitors and general practitioners provide an opportunity to identify hazards in the home and discuss preventative measures (Carter *et al.*, 1992; Levene, 1992; Morgan and Carter, 1996). Advice regarding safety equipment, including loan schemes, can be given by general practitioners and health visitors during child health surveillance consultations (Carter *et al.*, 1992; Levene, 1992; Kendrick, 1994; Morgan and Carter, 1996). Treatment room nurses are also playing an increasingly important role in health education and disease prevention in primary care (Cant and Killoran, 1993). A child presenting to the practice for treatment following an acute unintentional injury provides the practice nurse with an opportunity to discuss the circumstances of the injury and measures to prevent future injuries (Kendrick, 1994). In addition, PHCTs also have opportunities to influence environmental and legislative changes by becoming involved in local safety groups, and lobbying and campaigning on safety issues (Sibert, 1991; Kendrick, 1994).

There is some evidence that PHCT members can be effective in facilitating the reduction of hazards in the home, increases in safety equipment use and in some cases reductions in injury frequency (Colver *et al.*, 1982; Bass, 1993; Bass *et al.*, 1993; Towner *et al.*, 1993). In addition, many primary health care professionals regard health promotion in general (Williams and Winfield, 1989; Wood *et al.*, 1989; Hayes, 1990; Littlewood and Parker, 1992) and injury prevention in particular (Carter *et al.*, 1992; Morgan and Carter, 1996) as an important aspect of their work, although many have expressed concern over their ability to carry out such programmes effectively (Williams and Winfield, 1989; Wood *et al.*, 1989; Bradford and Winn, 1993; Kendrick *et al.*, 1995b). Consequently opportunities for health promotion may be missed in primary care (Williams and Winfield, 1989). Important barriers to undertaking preventative work have been identified by PHCT members, and include deficient NHS funding (Hayes, 1990), lack of time, poor communication skills (Carter *et al.*, 1992; Tapper-Jones *et al.*, 1990), and an absence of health promotion training and education (Carter *et al.*, 1992; Selby, 1992; Robinson and Robinson, 1993; Ross *et al.*, 1994; Morgan and Carter, 1996). Lack of teamwork has also been acknowledged as a common obstacle to prevention work (Cant and Killoran, 1993).

It has been suggested that educational opportunities for multi-disciplinary training and team building (Morgan and Carter, 1996; Selby, 1992) may provide the support necessary to facilitate preventative work in general (Kottke *et al.*, 1993; Pommerenke and Dietrich, 1992a,b) and injury prevention work in particular (Kendrick, 1994). This study therefore aims to assess the effectiveness of a multi-disciplinary training programme in increasing knowledge and in changing attitudes and practice in injury prevention amongst primary health care professionals.

**Methods**

**Subjects**

All primary health care team members in Nottinghamshire were invited to attend a 1 day multi-agency injury prevention training workshop. The workshops were held on different dates and at various locations throughout the county over a 6 month time period. PHCT members who attended the training sessions, and who had also completed both pre- and post-training questionnaires were identified as the training group. A comparison was selected from a list of professionals of the same
status who had not attended the training session and who had also completed both questionnaires. The comparison group was chosen from the list by matching an untrained professional with a trained professional on the basis of pre-training attitude and knowledge scores (to within 1 point of each score). Analysis of the pre-training accident prevention practices of both groups showed no significant differences.

**Training intervention**

The injury prevention training workshops were designed by a multi-agency group consisting of health promotion officers, a Family Health Service Authority (FHSA) health promotion advisor, a public health nurse and health visitor, the co-ordinator of a local healthy cities project, a general practitioner and public health physician, and the training co-ordinator of the FHSA. A resource pack for people working with the under 5's and their families was designed and produced prior to the training, and distributed at the training sessions (Nottinghamshire Family Health Services Authority, 1993). The training workshops were undertaken on a locality basis in order to facilitate networking between individuals working in the same community.

Training workshops consisted of small group work using materials designed by the Child Accident Prevention Trust (CAPT) for training health visitors (CAPT, 1991). An adapted version of the ‘Picture of Childhood Accidents’ questionnaire was used, as was the ‘Why Accidents Happen’ exercise. Both these exercises were followed by group discussion. The Accident Prevention Resource Pack (Nottinghamshire Family Health Services Authority, 1993) was then introduced and participants were asked to work in groups with professionals with similar roles, and to choose one item from the pack and to consider how they would incorporate it into their routine practice.

The objectives of the training were to increase knowledge concerning unintentional injury epidemiology, examine attitudes towards such injuries and their prevention, to provide an opportunity for people involved in injury prevention in one locality to communicate with each other, and to examine ways of using the injury prevention resource pack in routine work.

A total of 170 participants attended nine training workshops over a period of 6 months. Representatives attending the workshops from organizations outside of the primary health care team consisted of 31 nursery nurses/teachers, 13 school nurses, 19 playgroup assistants/leaders, five medical receptionists, four juvenile support workers, four police and safety officers, three district nurses, two ward sisters, two social workers, one representative from the ambulance service, and one practice manager. Of the 48 health visitors, 18 general practitioners and 22 practice nurses attending the workshops, a total of 31 health visitors, 11 general practitioners and 16 practice nurses had completed both the pre- and post-training questionnaires.

**Evaluation methodology**

The effectiveness of the training was assessed as part of a larger study. A self-completed questionnaire concerning knowledge of childhood unintentional injury epidemiology, attitudes towards and current practices in injury prevention was designed and piloted on a group of practice nurses, general practitioner trainees, general practitioners and health visitors in Nottinghamshire. The questionnaire and stamped addressed envelope was mailed to all practice nurses, health visitors and general practitioners in Nottinghamshire 3–4 months before and after the training workshops. Responses from PHCT members who had attended the training sessions and completed both the pre- and post-training questionnaires were compared with a comparison group, of the same professional status, who had not attended the training session and who had also completed both questionnaires.

The questionnaire contained four sections. The first consisted of attitudinal statements concerning injury prevention activities, including those suggested in the *Health of the Nation* for the PHCT. Possible responses ranged from strongly agree to
strongly disagree on a five-point Likert scale. The internal consistency of the attitudinal section of the questionnaire has been assessed by calculating correlation coefficients between each attitudinal statement and the total score (excluding the score for that attitudinal statement), and by calculating Cronbach's $\alpha$ coefficient (Steiner and Norman, 1991). The second section consisted of questions concerning current practice, with responses ranging from always to never, with a not applicable category, again covering activities suggested in the *Health of the Nation*. Content validity for the attitudinal and current practice sections was established by obtaining the views of primary health care professionals belonging to a local practice nurse educational group, general practitioner trainees, general practitioners and health visitors, and by ensuring that all activities included in the *Health of the Nation* were covered. The knowledge questions covered the subject matter included in the CAPT's 'Picture of Childhood Accidents' (CAPT, 1991) questionnaire and additional questions concerning risk factors for childhood unintentional injury, and the type of injury most commonly requiring accident and emergency department attendance were added. This questionnaire was originally developed by the CAPT as an educational tool to be used for accident prevention training for health visitors. It was adapted for postal use, and content validity was established by ensuring the injuries most commonly causing mortality and morbidity were included (DTI, 1989,1995; OPCS, 1992). The pre- and post-training knowledge scores were also used to assess the validity of the instrument in measuring knowledge in practice nurses (Kendrick et al., 1995a). The correct answers to the knowledge questions were obtained from the information sheet provided by the CAPT for use with the original questionnaire (Pommerenke and Dietrich, 1992b). The final section comprised questions relating to the personal and socio-demographic characteristics of PHCT members such as age, sex, qualifications, experience in health visiting, paediatric or school nursing, whether the respondent had any children and their children's unintentional injury history.

The training was also evaluated by asking all participants who attended the workshops to complete a questionnaire concerning the actual training session which was given to participants to complete at the end of the training session. Between 3 and 4 months after each training session, all participants were sent a follow-up questionnaire covering current accident prevention activity and the use of the injury prevention resource pack subsequent to training.

**Data analysis**

The data was entered and analysed using the SPSS-PC statistical package. A knowledge score was computed by totalling all correct responses. An attitude score was computed by totalling all strongly agree or agree responses to positive statements and all strongly disagree or disagree responses to negative statements. In addition, the number of individuals, in both groups, whose post-training responses to the attitudinal and practice questions had changed to either a more positive statement, a more negative statement or whose response had remained the same was calculated. Comparisons of categorical data were made using $\chi^2$ tests, comparisons of pre- and post-training knowledge and attitude scores for both the trained and control groups were made using Wilcoxon matched-pairs signed rank tests.

**Results**

**Sample characteristics**

Seventy percent (40) of the trained group and 58% (33) of the comparison group were aged under 44 years. The trained group consisted of 51 females and seven males; the control group of 56 females and two males. Two of the general practitioners in both the trained and comparison group were from single-handed practices, the remaining nine general practitioners in the trained and control group came from practices with four or more partners. Seventy-four percent (43) of the untrained group and 81% (47) of the comparison group had children of their own. The children of 46% (26) of the trained group and 51% (29) of the comparison group had attended an accident and emergency department following
an accidental injury. The children of 10% (five) of the trained group and 15% (eight) of the comparison group had been admitted to hospital following an accidental injury at some point in their lives. None of the differences in characteristics between the trained and control group were statistically significant.

**Knowledge of accidental injury epidemiology**

There was a significant increase in the knowledge scores of the training group overall (Wilcoxon matched-pairs, \( P = 0.001 \)). The differences were also significant when analysed by professional groups (Table I). Although the overall knowledge scores of the comparison group increased, the change did not reach statistical significance (Wilcoxon matched-pairs, \( P = 0.11 \)). Similarly when analysed by professional groups, no significant differences were demonstrated in the comparison group’s knowledge scores (health visitors \( P = 0.37 \), general practitioners \( P = 0.47 \), practice nurses \( P = 0.32 \)).

**Attitudes towards accident prevention**

Correlations were obtained between each attitudinal statement and the total attitude scores of general practitioners, health visitors and practice nurses from the pre-training responses from the questionnaire (Scott et al., 1986; Kendrick et al., 1995b; Marsh et al., 1995). Correlation coefficients ranged from 0.20 to 0.59 for general practitioners, from 0.20 to 0.55 for health visitors and from 0.25 to 0.61 for the practice nurses’ responses. Internal consistency was assessed by calculating Cronbach’s \( \alpha \) coefficient which was equal to 0.67 for general practitioners, 0.53 for health visitors and 0.60 for practice nurses.

Although a higher percentage of participants responded more positively to the majority of questions after training than the control group, the changes were not significant. Table II highlights the relatively high baseline attitude scores of the general practitioners and health visitors with no significant changes demonstrated in these two groups following training (Wilcoxon matched-pairs, health visitors \( P = 0.56 \), general practitioners \( P = 0.73 \)). There was, however, a significant increase in the practice nurses attitude scores (\( P = 0.01 \)). No change was seen in the attitude scores of the general practitioners (Wilcoxon matched-pairs, \( P = 0.20 \)), health visitors (Wilcoxon matched-pairs, \( P = 0.25 \)) and practice nurses (Wilcoxon matched-pairs, \( P = 0.08 \)) in the comparison group.

**Current practice in accident prevention**

Although injury prevention activity levels were relatively low before training, an increase in the activities of both groups was demonstrated and, although for most questions a higher percentage of the trained group were carrying out these activities more frequently, the majority of increases were not statistically significant. There was, however, a significant increase in some practices which are shown in Table III. An increase was seen in the frequency of health visitors identifying hazards on home visits and discussing them with parents (\( \chi^2 = 6.19 \), d.f. = 2, \( P = 0.04 \)). Similarly, a significant increase was seen in the number of health visitors who, on receiving notification of a child attending the A&E department following an accident, carried

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**Table I. Pre- and post-training knowledge scores of the trained group**

<table>
<thead>
<tr>
<th>Professional group</th>
<th>Pre-training</th>
<th>Post-training</th>
<th>( P ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25th percentile</td>
<td>Median score</td>
<td>75th percentile</td>
</tr>
<tr>
<td>Health visitors</td>
<td>12</td>
<td>13.5</td>
<td>15.5</td>
</tr>
<tr>
<td>General practitioners</td>
<td>10.5</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Practice nurses</td>
<td>7</td>
<td>10</td>
<td>13.5</td>
</tr>
</tbody>
</table>

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Table II. Pre- and post-training attitude scores of the trained group

<table>
<thead>
<tr>
<th>Professional group</th>
<th>Pre-training</th>
<th>Post-training</th>
<th>25th percentile</th>
<th>Median score</th>
<th>75th percentile</th>
<th>25th percentile</th>
<th>Median score</th>
<th>75th percentile</th>
<th>( P ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health visitors</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General practitioners</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice nurses</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table III. Injury prevention practices of the trained group which demonstrated a significant change towards more positive post-training responses when compared to the controls

<table>
<thead>
<tr>
<th>Professional group and injury prevention practice questions</th>
<th>Post-training response</th>
<th>No change in post-training response</th>
<th>Post-training response</th>
<th>Change (%) towards a more positive response</th>
<th>( P ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health visitors</td>
<td>trained group</td>
<td>5</td>
<td>19</td>
<td>7</td>
<td>22.5</td>
</tr>
<tr>
<td>How often do you identify home hazards?</td>
<td>control group</td>
<td>10</td>
<td>20</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>When you receive notification of a child's accident how often do you do a follow-up visit?</td>
<td>trained group</td>
<td>6</td>
<td>18</td>
<td>7</td>
<td>22.5</td>
</tr>
<tr>
<td>control group</td>
<td>6</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>General practitioners</td>
<td>trained group</td>
<td>0</td>
<td>4</td>
<td>7</td>
<td>63.6</td>
</tr>
<tr>
<td>Posters on child safety have been displayed in the practice waiting room</td>
<td>control group</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

\* Health visitors, \( N = 31 \); general practitioners, \( N = 11 \); practice nurses \( N = 16 \).
No significant change was demonstrated in the practice nurse's injury prevention practices.

out a home visit to discuss accident prevention \((\chi^2 = 9.19, \text{d.f.} = 2, P = 0.01)\). The number of general practitioners displaying posters in the surgery waiting rooms also significantly increased \((\chi^2 = 9.21, \text{d.f.} = 2, P = 0.002)\). Not surprisingly there was a significant increase in those attending a course or lecture in the training group \((\chi^2 = 35.46, \text{d.f.} = 2, P = 0.0001)\).

Overall a significant increase in the number of contacts with representatives of other agencies and individuals concerning child safety was demonstrated in the training group (Wilcoxon matched-pairs, \( P = 0.02 \)) but not in the comparison group. Increases in the number of PHCT professionals reporting contact with the various agencies is shown in Table IV. It demonstrates that after training more PHCT professionals had contact with agencies outside the PHCT as well as with other members of the PHCT.

Discussion

Education and training with regard to injury prevention produced significant increases in knowledge scores and some changes in the subsequent practice of PHCT participants, but no significant changes in attitudes except for practice nurses. Levels of injury prevention activities were also relatively low both before and after training.

Several methodological limitations which may
Injury prevention training

Table IV. Number of PHCT professionals having contacts with a range of agencies and individuals concerning injury prevention pre- and post-training

<table>
<thead>
<tr>
<th>Organizations and individuals</th>
<th>Pre-training contacts: trained group [n (%)]</th>
<th>Post-training contacts: trained group [n (%)]</th>
<th>Pre-training contacts: control group [n (%)]</th>
<th>Post-training contacts: control group [n (%)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing department</td>
<td>29 (50.0)</td>
<td>32 (55.0)</td>
<td>26 (44.8)</td>
<td>27 (46.5)</td>
</tr>
<tr>
<td>Environmental health</td>
<td>16 (27.5)</td>
<td>20 (34.4)</td>
<td>18 (31.0)</td>
<td>18 (31.0)</td>
</tr>
<tr>
<td>Community paediatrician</td>
<td>16 (27.5)</td>
<td>17 (29.5)</td>
<td>17 (29.5)</td>
<td>18 (31.0)</td>
</tr>
<tr>
<td>Police</td>
<td>8 (13.1)</td>
<td>11 (18.9)</td>
<td>7 (12.0)</td>
<td>4 (6.6)</td>
</tr>
<tr>
<td>Local schools</td>
<td>21 (36.2)</td>
<td>23 (39.6)</td>
<td>19 (32.7)</td>
<td>19 (32.7)</td>
</tr>
<tr>
<td>General practitioners</td>
<td>38 (65.5)</td>
<td>43 (74.1)</td>
<td>30 (51.0)</td>
<td>32 (55.1)</td>
</tr>
</tbody>
</table>

explain these findings must be taken into account when interpreting these results. Attitudes (Jonas, 1982; Scott et al., 1986) and knowledge (Rich et al., 1989) have previously been suggested as having an impact on the amount of prevention practice provided in primary care. By matching on these two variables we excluded the possibility that knowledge and attitudes differed between the training and control group, and that such a difference could explain the changes in practice observed.

However, there may also be other factors which may influence the ability to change practice and these factors may have differed between those choosing to attend the training and those choosing not to attend. As the number of PHCT members attending the training was relatively small, it was not possible to randomly allocate those requesting training to a group receiving immediate training and a group receiving training at a later date who could have acted as a control group. We were therefore unable to limit the effects of selection bias by randomly allocating those PHCT members who wished to attend the training to either an intervention or control group. It is therefore possible that those professionals most motivated to change their practice or those perceiving fewer barriers to changing practice chose to attend the workshops. Without data on perceived barriers to change and perceived ease of overcoming such barriers, it is difficult to exclude the effect of selection bias.

In view of the small numbers, especially in the analysis by professional groups, the study may also have had insufficient power to detect the changes needed in attitudes and practice to demonstrate any significant difference. It is also possible that the questions incorporated in the study were not sensitive enough to detect a change in attitudes. A further possible explanation for the absence of any significant differences in attitudes of the health visitors and general practitioners in the trained group may, however, be due to their extremely positive baseline attitudes.

It is not possible on the basis of this study therefore to determine whether the changes in practice and knowledge were achieved entirely by the training workshops or whether the training group was a particularly motivated group who would have changed their practice without the training. Previous work suggests that a lack of knowledge can be an important factor in discouraging preventative work (Carter et al., 1992; Rich et al., 1989). Unless primary health care teams are aware of the benefits of injury prevention work then they are unlikely to incorporate it into their clinical practice (Ross et al., 1994; Kottke et al., 1993; Pomerene and Dietrich, 1992a; Battista et al., 1986). Analysis of the questionnaire handed out on the training day showed that two-thirds of participants felt the training had made them more aware of the importance of injury prevention in their routine work. In addition more than 85% felt more confident in undertaking injury prevention activities and felt they had learnt new approaches to preventing accidents, suggesting that training
may at least be partly responsible for the observed changes in practice.

One of the specific objectives of the course was to encourage participants to apply the knowledge gained into formulating action plans for implementation into their own practices. It was encouraging therefore to see that a significant number of health visitors were identifying hazards in the home and discussing them with parents on home visits, particularly as this has been shown to be effective in persuading parents to make safety changes in the home (Colver et al., 1982). A significant increase was also seen in the number of health visitors conducting post-accident follow-up visits to discuss the injury and future prevention. Previously this area of preventative work has been acknowledged by both parents (Coombes, 1991) and health visitors (Laidman, 1987) as difficult.

As the training day did not specifically address the training needs concerning post-accident follow-up visits, this is an interesting finding. A possible explanation for this may be that the contact with other health visitors along with opportunities to discuss injury prevention and the provision of a set of resources to use with parents may have fulfilled some of the training needs in this area.

One of the most positive outcomes of the training in terms of creating healthy alliances was the significant increase in the number of contacts with representatives of other agencies concerned with child safety outside of the PHCT. Healthy alliances have not, as yet, been adequately evaluated, although many people suggest they will improve injury prevention activities (Schelp, 1988; Brown et al., 1989; Roberts, 1991; DoH, 1993; CAPT, 1995). This view is supported from a recent evaluation of healthy alliances in the UK which demonstrated a positive impact on those targeted with injury prevention initiatives (CAPT, 1995). An increase in the number of primary care members becoming involved in community-based projects, by joining local safety groups and lobbying or campaigning on local safety issues, was, however, not demonstrated in our study. This was disappointing as the absence of general practitioners on local safety groups has previously been suggested as detrimental to their effectiveness (Morgan and Carter, 1996).

Most of the changes in practice involved health visitors; this was not surprising as health visitors are the professionals whose role in injury prevention is most well defined (Laidman, 1987; Brown et al., 1989; Carter et al., 1992; Kendrick, 1994; Steel et al., 1994; Marsh et al., 1995) when compared to general practitioners (Kendrick, 1994; Morgan and Carter, 1996) and practice nurses (Kendrick et al., 1995a). Increases in the number of general practitioners displaying posters in their waiting rooms indicates a change in practice which requires little time on the part of the general practitioner. Lack of time has frequently been suggested in the past as a factor in not undertaking injury prevention activities and prevention work in general (Tapper-Jones et al., 1990; Kotke et al., 1993; Towner et al., 1993). The absence of any change in the practice nurses’ prevention activities probably reflects the current uncertainty relating to their role in injury prevention (Steel et al., 1994; Kendrick et al., 1995a). Increased involvement may therefore have been difficult, although the small numbers in this study were insufficient to confirm this. It is also likely, as has been demonstrated previously (Lewis, 1988), that the self reporting of injury preventive activity in this study may have been an overestimate of the actual activities currently being undertaken by health professionals.

In conclusion, the study demonstrated that injury prevention training was associated with increases in knowledge and some self-reported injury prevention practice. While no significant differences were demonstrated in the attitudes of health visitors and general practitioners, this could be explained by the extremely positive attitudes held prior to the training. Without follow-up the study could not demonstrate whether these changes were short or longer term. To ensure lasting change continual reinforcement of new knowledge is essential (McGuire et al., 1964).

Training and education combined with other methods such as legislative approaches are more likely to bring about significant changes in practice (Horder et al., 1986). Team work has also been
shown as having the most effect on changing patterns of activity within general practice (Cant and Killoran, 1993; Horder et al., 1986). Evidence from this study suggests the extent of practice nurse and general practitioner involvement in injury prevention work, is at present still minimal and that injury prevention training is not likely to have a great effect on this. It is unlikely that injury prevention training programmes will be more effective until we have a further understanding of the barriers to injury prevention practice in primary care.

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References


P. Marsh and D. Kendrick

Nottinghamshire Family Health Services Authority, Nottingham Health, North Nottinghamshire Health Authority, City of Nottingham (1993) Accident Prevention and the under Fives. An information pack for those working with the under 5's and their families.


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