Primary care organization board members' views on accident prevention

Lindsay Groom, Julia Hippisley-Cox and **Denise Kendrick** Division of Primary Care, School of Community Health Sciences, University of Nottingham, Nottingham, UK

This study aimed to explore the accident prevention activities of primary care organizations (PCOs) and the views of their board members regarding accident prevention. Qualitative study using semi-structured telephone interviews of 17 board members of PCOs (primary care groups and primary care trusts) in the National Health Service (NHS) Trent Region was undertaken. Accident prevention activity varied substantially between PCOs. The reduction of home hazards was a frequent focus of the PCOs' accident prevention initiatives. Board members did not see accident prevention as their biggest priority in health improvement, although they had positive attitudes towards it. Local morbidity and NHS guidance were seen to be key determinants of PCOs' priorities in health promotion. There was little reference to any strategic planning for accident prevention. Information to support accident prevention could be more timely and relevant to PCOs' needs. The degree of involvement with outside agencies in accident prevention work varied substantially. Collaboration between agencies may be held back by mutual lack of knowledge and differences in culture and priorities. It was concluded that accident prevention appears to be receiving less attention in PCOs than other national health priorities. They may need more support for developing strategies for accident prevention and better provision of information so that they can identify local problems which can be addressed by preventative activities. The accident prevention plans contained in health improvement programmes should be monitored.

Key words: accident prevention; attitude of health personnel; health promotion; health services; primary care organizations

Introduction

Primary care organisations (primary care groups and primary care trusts) have been given the responsibility to participate in local planning to tackle accidents and to have a role in the delivery of actions to reduce them. Prevention of accidental injury was one of the four major priorities outlined by the government in 'Our Healthier Nation: A Contract for Health' (Secretary of State for Health, 1998). It gave examples of injury prevention innovations that could be undertaken by local agencies and communities including making travelling,

Address for correspondence: Lindsay Groom, R&D Office, Broxtowe and Hucknall Primary Care Trust, Hucknall Health Centre, 54 Curtis Street, Hucknall, Nottingham NG15 7JE, UK. Email: lindsay.groom@nottingham.ac.uk

workplaces, and playgrounds safer, ensuring those in need have aids to prevent accidents, targeting accident prevention at high risk groups, and providing preventative treatment to women at risk of osteoporosis.

In 1998, the government introduced health improvement programmes, (HImPs) for addressing the national health agenda. It laid down that primary care groups (PCGs) should be involved in the strategic planning process which would take proper account of locally determined needs, as well as national priorities (NHS Executive, 1998). A later circular required PCGs, working with Health Authorities, to take responsibility for delivering a programme of action to achieve the HImP (Department of Health, 1999a). Fully developed HImPs were expected to include the four 'Our Healthier Nation' major priority areas. An analysis

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of 36 HimPs in April 1999 showed that most of these had accidents as a priority, though the proportion was substantially less than for the other three our healthier nation major priority areas of coronary heart disease/stroke, mental health or cancer (Abbot and Gillam, 2000).

By the end of 2000 a minority of PCGs had become primary care trusts (PCTs). Many others were planning to do so. PCTs were required to take on responsibility for improving the health of their communities (Department of Health, 1999b) and accident prevention was one of the tasks that PCTs were charged with taking forward.

In 1999 less than 10% of PCGs had undertaken a needs assessment for accidents (Wilkin et al., 1999). They were more likely to have undertaken them for other health priority areas: over 40% for coronary heart disease (CHD)/stroke and over 30% for mental health. When Watson and White (2001) surveyed health authorities (HAs) most included accidents in their top five priorities, though accidents were mentioned as a priority less frequently than CHD/stroke, cancer and mental health. Threequarters of HAs had at least one accident prevention strategy and 80% had an organized accident prevention alliance. These findings suggest that at that time, HAs were more active in planning to reduce accidents than were the new PCGs. In 2000, the second National Tracker Survey found that although the proportion of primary care organizations (PCOs) that had conducted a needs assessment for accidents had increased to 28%, the priority given to accident prevention was again low in comparison to CHD and mental health (Wilkin et al., 2001).

Accident prevention work is currently the responsibility of many organizations. Statutory and nonstatutory organizations with a remit for accident prevention include the Department of Trade and Industry, the Department for the Environment Transport and the Regions, the Highways Authority, local authorities, voluntary organizations and the NHS. Saving lives: our healthier nation specifically encouraged PCGs and PCTs to develop local partnerships to work together in this field (Department of Health, 1999c). PCOs have made links with other local organizations, and begun to work jointly with them. By 2000, nearly all PCOs were involved in partnership initiatives with local authorities (Wilkin et al., 2001). The extent of collaboration between PCOs and outside agencies

for accident prevention initiatives is, however, currently unknown.

Although accident prevention is a PCO responsibility, there have as yet been no published studies about PCO board members' views on this subject. The present study formed part of a larger research project which also included a questionnaire survey of all PCO board members in Trent Region in 2000 (Kendrick et al., 2003) and the analysis of hospital admissions data for accidental injury in the region over a five-year period (Hippisley-Cox et al., 2002). The present study aimed to expand upon the results of the questionnaire survey by exploring similar issues through semi-structured interviews. It explored PCOs' accident prevention activities, board members' attitudes to accident prevention, their views about their PCO's participation in accident prevention and the factors influencing involvement.

Method

Semi-structured telephone interviews were conducted with a sample of board members from PCOs in Trent Region. These interviews explored attitudes to accident prevention, the priority given to accident prevention within the PCO, and factors associated with successful accident prevention work. The interviews also explored PCOs' activities in health promotion for areas other than accident prevention, where this might throw light on their involvement in accident prevention. Ethical approval was obtained for the study from regional and local ethical committees. PCOs have not been identified as PCGs or PCTs to maintain confidentiality.

Selection of respondents

Seventeen PCO board members were interviewed. We recruited potential interviewees during a questionnaire survey conducted in Spring 2000 (Kendrick et al., 2003) of all 669 members of 51 PCO boards in Trent Region; 135 board members (20.2% of those sent questionnaires) indicated their consent to be interviewed. The sample of PCOs was selected so that they represented a broad range of the following characteristics: presence or absence of an accident prevention strategy and hospital admission rates for accidental injury. Information on the existence of accident prevention strategies was obtained from the questionnaire survey (Kendrick et al., 2003) and hospital admission rates for accidental injury were obtained using data from a related study (Hippisley-Cox et al., 2002). Of the 44 PCOs where at least one member agreed to be interviewed, we had no information for three PCOs on the presence or absence of an accident prevention strategy and admission rates for two PCOs could not calculated because of incomplete data. From the remaining 39 PCOs we chose 20 at random, stratified by the above characteristics.

One board member was chosen from each selected PCO. Wherever the person with most responsibility for health promotion in a selected PCO (the 'health promotion lead') had consented. this individual was selected in order to ensure adequate coverage of this group. Otherwise, one consenting individual was selected at random. Two potential interviewees declined to be interviewed and obtaining interviews was unsuccessful with three others. Two further individuals from other PCOs were then identified, resulting in a final sample size of 17. Characteristics of the PCOs of the interviewees are summarized in Table 1.

Interview schedule and conduct of interviews

The interview schedule was informed by the questionnaire survey. It was structured to explore:

- The respondent's PCO's involvement in accident prevention and other health promotion activities, whether they had a strategy for accident prevention or health promotion, and their views on the relevant information available to them.
- Views on the PCO's priorities in the light of those described in 'Our Healthier Nation' (Secretary of State for Health, 1998).
- Attitudes to accident prevention activities and beliefs regarding effective interventions to reduce accidental injury.
- Collaborations with outside agencies in accident prevention and health promotion.

All interviews were conducted by LG by telephone between December 2000 and March 2001. They were tape recorded with the respondent's agreement. Respondents were assured that their responses would be anonymised.

Analysis

The taped interviews were transcribed, the transcripts checked against the tapes and anonymised. Transcripts were imported into QSR N5 (QSR International Pty, Ltd, 2000) software for coding and analysis. The 'framework' approach to qualitative data analysis was used (Pope et al., 2000). A hierarchical framework for analysis was developed from close examination of the first four transcripts and subsequently modified where necessary as the analytical process continued. The elements of the framework drew on the objectives of the study, and issues raised by the interviewees' responses. This resulted in a detailed set of codes which was applied to all the data. Data relating to each element of the framework were then collated and summarized, and the range of responses identified. This was followed by interpretation of the results in the light of the research objectives. In addition, descriptive data on accident prevention initiatives were entered into Microsoft Access to facilitate data handling. When all transcripts had been coded, LG undertook a secondary analysis of the first four transcripts using the revised coding scheme to validate the findings.

Results

The respondents and their PCOs

Seventeen interviews were undertaken. Sixteen respondents were on PCG boards, and one was on a PCT board. The respondents' professional roles, their PCO area's hospital admission rates for accidental injury and whether their PCO undertook accident prevention activities are listed in Table 1.

The influences on the PCO's accident prevention activity

Accident prevention as a PCO health promotion priority

In our earlier questionnaire survey (Kendrick et al., 2003) respondents were asked to indicate which area of the four 'Our Healthier Nation' priority areas, they considered to be their PCG's highest priority. At that time, nearly all respondents had indicated that 'coronary heart disease and stroke' was their highest priority. The interviewees in the present study were asked the reasons for their choice of priority area. In their responses, some

Table 1 Characteristics of respondents and their PCOs

Respondent's code number	Professional role	Rate of admissions to hospital following accidental injury for the PCO area over 5-year period*	Presence of accident prevention strategy**	Whether PCO undertook accident prevention activities***
103	Nursing	Low	No	No
253	Nursing (health promotion lead)	High	No	Yes
492	Nursing	Low	Yes	Yes
311	Nursing	Medium	Yes	No
724	Nursing	High	No	Yes
363	Nursing (health promotion lead)	Medium	No	Yes
324	GP	Low	No	Yes
393	GP	Low	No	No
425	GP	High	Yes	No
506	Lay person	High	No	No
515	Lay person	Low	No	Yes
266	Lay person	High	Yes	No
066	Health Authority rep.	Low	Yes	Yes
477	Health Authority rep.	Medium	No	No
714	Health Authority rep. (health promotion lead)	High	No	Yes
032	Social Services rep.	High	Yes	Yes
749	Other	Low	Yes	Yes
Totals for each category	Nursing 6; GP 3; Lay person 3; Health Authority Representative 3; Social Services Representative 1; Other 1	'Low' 7; 'Medium' 3; 'High' 7	'Yes' 7; 'No' 10	'Yes' 10; 'No' 7

^{*}Rates of accidental injury admissions to hospitals in Trent from 1992–1997 (unpublished data from linked research study): 'low' denotes the PCO was in the 40% with the lowest rates, 'medium' means the PCO was in central 20%, 'high' means the PCO was in the 40% with the highest rates.

interviewees also expressed their views on the priority given to accident prevention. None of these said that accident prevention was their most important priority in promoting health, but a number did see accident prevention as one of their PCO's priority areas. As one respondent expressed it:

I'm sure that every PCG in the country will say that accident prevention is one of its priorities. (32).

Local morbidity was the most frequently mentioned factor influencing the priority given to health promotion areas. The need to meet HImP

targets, and national guidance such as the National Service Frameworks were also mentioned as important.

Local morbidity

Respondents were aware of substantial local health problems, with nearly all respondents indicating concern about high local morbidity for CHD/stroke; some respondents were concerned about local morbidity for mental health problems, cancer and teenage pregnancies:

The incidence in this area, in some of the practice stats, was quite high so I think it was

^{**}Information obtained from questionnaire survey.

^{***}Information obtained from the interview. Includes current, completed or planned activities. Excludes accident prevention that is part of Health Visitors' normal duties, or undertaken to ensure patients' safety on surgery premises.

identified by the PCG as being our priorities. (103, referring to heart disease and stroke)

Some respondents were aware of problems in particular parts of their local area (e.g., deprived areas), or in a particular population group e.g., ethnic minorities or the elderly:

We have a quite a sizeable Asian population in part of the area and the incidence of CHD for example is particularly high ... that is why we do have a project relating particularly to CHD for ethnic minorities. (515)

Many respondents were concerned at local high levels of accidents in general or particular types of accident, predominantly road traffic accidents:

They're (PCO employee), with the council, looking at road traffic accidents in this area because we're high. (724)

Awareness of local problems with accidental injury did not result in respondents giving accident prevention relatively high priority however. Accidental injury may have been only one of the significant health problems in their area:

We have a high incidence of coronary heart disease, we have a high incidence of cancer, we have a high incidence of accidents so they're all pretty bad. (724)

Health Improvement Programmes (HImPs)

Several respondents indicated that their HImP strongly influenced their agenda. Several PCOs had set up health improvement subgroups to address HImP issues. Targets and priorities in the HImP became reflected in the PCO's priorities:

As a Board we said we need to meet the targets within the HImP and the priorities within the HImP. (311)

The Health Authority gives the broad priorities, so they're the 'givens' about priority areas, so we get the HImP and then we have to work up a local response to that. (32)

Some respondents were aware that targets for accident prevention had been set in the local HImP. However, only one respondent related these targets to an accident prevention activity that the PCO was involved in.

National Service Frameworks (NSFs)

The NSF for Coronary Heart Disease (Department of Health, 2000) was published in March 2000, shortly before our questionnaire survey took place. It followed the 1999 NSF for Mental Health (Department of Health, 1999d). A minority of respondents saw the NSFs, particularly the one concerning CHD, as a strong influence on PCO activities:

These are the 'must be dones'; these are directives coming down that we must tackle heart disease. (724)

Respondents' views on the involvement of the PCO in accident prevention

When asked whether there were any accident prevention activities they would like the PCO to be involved in, respondents showed generally positive attitudes towards accident prevention and some were enthusiastic about current projects or areas they would like to develop:

We do have a big problem with falls, so it's definitely an area where I think we ought to be doing more. (311)

No one indicated that accident prevention was not worthwhile. However, a few suggested it might not always be the PCO's role to lead on accident prevention:

If we identified that head injuries from cycling was a potential area . . . and we know there is evidence to say that helmets are effective but . . . would health necessarily be the right people to lead on that? (714)

Respondents' views on the effectiveness of interventions to prevent accidental injury

Respondents were asked to suggest interventions to reduce accidents that were particularly effective. They frequently cited interventions that were purely educational, using mass media, posters in surgeries or through face to face education from health professionals:

Try and increase greater public awareness of things really ... I'm a great believer in the power of television. (425)

Poster advertising campaigns, I think they do have a drip, drip effect and raise people's awareness. (103)

This view is considered to be at variance with research evidence that educational approaches used in isolation are less effective than combined approaches where education is used to back up environmental improvement or enforcement (British Medical Association, 2001). It also contrasts with the initiatives that PCOs were reported as undertaking, which rarely relied solely on education (Table 2). However, three respondents cited the

identification and reduction of home hazards as potentially effective, a view for which research evidence provides some support (Nuffield Institute for Health *et al.*, 1996).

Research evidence on the effectiveness of specific interventions was rarely cited by respondents as having influenced the work on accident prevention that their PCO had undertaken.

Table 2 PCOs' accident prevention initiatives

	Number in operation or completed	Details of initiative (other agencies involved)	
Home safety specifically aimed at children	1	Providing free or low cost fireguards.	
Home safety specifically aimed at the elderly	4	 Identifying and reducing hazards, providing safety equipment (Social Services and Environmental Health). Healthy Homes Initiative involving hazard identification, advice, hazard reduction in homes of frail older people (Community Trust). Training healthcare assistants (Social Services, another PCO, Police and Fire and Rescue). Hazard assessment and aids/adaptions provided (Red Cross and Social Services). 	
Falls in the elderly/prevention of osteoporosis*	3	 Appointment of a Falls Co-ordinator to run Falls Clinics. Hip protectors for elderly people at risk of falls. Hip protectors for elderly people at risk of falls. This is a separate project from the one listed above. 	
age groups/families		 Safety equipment for families on low incomes (Social Services). Home safety for people living in social housing (Several other organizations as part of an SRB5 (Single Regeneration Budget) initiative). Establishing a database of injuries, and producing health promotion materials (Social Services, Age Concern, general practices, district nurses). Home safety for people in disadvantaged areas: provision of equipment (Local council). 	
Road traffic accidents*	1	Annual Road Safety Week (Schools).	
Playground safety 2		 Safety for children in pub playgrounds. Questionnaire to landlords about facilities and safety (Local Health Forum). Healthy playgrounds: ensuring safe play surfaces in schools (Schools). 	
Other accident prevention*	1	Health and Safety Roadshows.	
Total	16		

^{*}The following were planned:

[·] Prevention of osteoporosis. Identifying patients, establishing protocols and programmes, acquiring a scanner.

[•] Drop-in centres for adolescents: planned to develop existing scheme to include accident prevention.

Promoting older children's use of cycle helmets, including providing helmets. The PCO planned to join this
project which was already running locally.

Information to inform accident prevention and other health promotion

Respondents were asked whether they always had the information necessary for making the best choices in accident prevention and other health promotion activities and whether the information they received from health authorities and NHSE Trent could be improved. They were fairly satisfied with the information available. They saw their information needs predominantly in terms of local morbidity data. Many were, however, aware of shortcomings in the data, feeling it could be more timely and relevant to the PCO's needs. Suggestions for improvement included: more information on the causes of accidents to aid targeting, information on geographical subareas within the PCO, making it easier to understand and more accessible and sending the information to the appropriate PCO member:

Once we've got the information as to the types of accidents and the age groups and the sort of, the places where they're happening, then we can start to develop some strategy. (324)

PCOs' accident prevention initiatives and strategies

Respondents were asked whether the PCO was involved in any accident prevention initiatives. The accident prevention initiatives mentioned in response to this question are listed in Table 2. Eight PCOs were undertaking accident prevention initiatives. A frequent focus was the reduction of home hazards. Another two PCOs were planning to start or join the following initiatives: to include accident prevention in existing drop-in centres for adolescents; to join an existing local project for promoting older children's use of cycle helmets; and to prevent osteoporosis through identifying patients, establishing protocols and acquiring a scanner. Seven PCOs had no involvement in accident prevention.

When asked whether their PCO had a strategy for accident prevention, few respondents reported that their PCO had one. However, PCOs often undertook accident prevention without a formal strategy:

We don't have an actual coherent strategy for accident prevention, it's just a scheme that came about. (324)

While there was little evidence of any strategic planning by PCOs specifically for accident prevention, it was occasionally mentioned as an element of other health promotion strategies, for example a strategy for the elderly which included fall prevention work. Some respondents identified their health promotion strategy as the local HImP.

Working with outside agencies in accident prevention

Most PCO accident prevention initiatives that respondents described were jointly carried out with other agencies (Table 2). For these initiatives, the PCOs' level of participation varied from only a peripheral involvement (for example through membership of a local Health Forum which ran a project), to leading on a joint project.

Respondents were asked their views about working jointly with other agencies: whether any projects had worked well, or not worked well and the reasons for this, whether they felt that other agencies were keen to work with them and what the respondent felt needed to be done to aid successful joint working. Responses about joint working with other agencies were generally positive. Some felt that the PCO and other agencies had a common purpose in promoting health. They did, however, identify difficulties in joint working in accident prevention and other work. Difficulties were often a result of a mutual lack of knowledge:

One of the big hurdles has been getting people to understand what PCGs are . . . And then when we come to primary care trusts, we've got to start again really. (515)

One of the problems is actually knowing who all these different organizations are. (324)

Other difficulties arose from differences in culture and priorities between the health service and other statutory bodies, especially local authorities:

You have to accept that your priorities are not necessarily their priorities because they have targets to meet as well. (66)

Respondents identified factors associated with successful joint working. One of these was common aims, with each organization being aware that involvement is in their interest:

Having a common goal or aim, I suppose, in thinking about what it is that we want to

achieve and that the people who we are going to work with are also interested in achieving that as well. (492)

Good communication and learning about each other's organization were also seen as important:

You actually learn about everybody's role and what can and can't be done and you come up with a more co-ordinated way forward. (311)

Respondents also identified the importance of individuals in the collaborating organizations. Successful joint working was sometimes facilitated by face-to-face meetings, ensuring that specific individuals were tasked with taking work forward, and maintaining links between individuals in the collaborating agencies.

Disussion

The principal findings of the study were:

- The extent of accident prevention activity in PCOs varied, with a substantial number having no involvement.
- Board members did not see accident prevention as their highest priority in health improvement, although they had positive attitudes towards it.
- Local morbidity and NHS directives were key determinants of PCOs' priorities in health promotion.
- There was little evidence of PCOs' strategic planning for accident prevention.
- The reduction of home hazards was a frequent focus of accident prevention work.
- There is a widespread perception that educational interventions are the most effective.
- Collaboration with other agencies may be hampered by mutual lack of knowledge and differences in culture and priorities.
- Information to support accident prevention could be more timely and relevant.

This is the only qualitative study to date exploring views of PCO board members with a focus on accident prevention. The respondents represented a mix of professions. However, as in many qualitative studies, the proportions of these in the sample differed from that of all board members. In particular, GPs in the sample were few since they were less likely to consent to be interviewed.

While acknowledging accident prevention as a priority for the PCO, respondents consistently saw accident prevention as a lesser priority than some other national priorities in health. These findings were in line with the findings from the questionnaire survey linked to the present study (Kendrick et al., 2003), the Audit Commission's survey of PCGs (Audit Commission, 2000) and Watson and White's study of health authorities (Watson and White, 2001). Because board members felt that morbidity was an important influence on their priorities, and because morbidity from accidental injury is substantially lower than that from CHD/stroke (Department of Health, 2002), this was not surprising.

Accident prevention work has tended to have been led by non-NHS statutory organizations such as the Highways Agency or local authorities, or the NHS at health authority level rather than in primary care. The range of agencies involved reflects the wide variety of possible interventions. Many of these activities have not traditionally been within the remit of primary care. This background may have discouraged PCOs from seeing their role as including taking the lead in accident prevention.

However, it is notable that significant numbers of PCOs were collaborating with other agencies in accident prevention and it was encouraging that they were generally positive about this joint working. There was awareness of barriers to be overcome in this field. Our respondents expressed concerns similar to those voiced in a series of seminars in 1999 involving PCG chief officers and social services representatives on PCG boards (Department of Health, 1999e). Participants in these seminars spoke of the need to explore differences in cultures between organizations and professions, and to develop better understanding of partners' roles and responsibilities.

Implications of the study

Policy and organizational changes have been introduced which may encourage the development of accident prevention initiatives. The requirement for PCOs to participate in the development of local HImPs, plus the guidance in the NSF for older people (referring to falls) may have raised awareness of accident prevention as being in PCOs' remit. However, the HImPs and NSFs have also raised awareness of other health promotion that PCOs must address and the total health improvement agenda is demanding. The absence of an NSF or similar national action plan specifically for accident prevention may result in it being given lower priority. It will be particularly important for local HImPs to include development of accident prevention activities both to encourage accident prevention and the strategic planning needed to address it effectively. PCOs' planning will need to refer to the needs of their populations including local morbidity, a factor that PCOs consider highly important. For this, PCOs will need timely and relevant information on local injury rates and causes of injury morbidity and information on relevant effective interventions. Examples of effective interventions that can be applied at a local level include the adoption of 20 mph zones in residential areas (Towner 2001); the provision and fitting of smoke alarms (Rowland, 2002); and home visiting programmes to families with young children (Elkan et al., 2000). Plans for interventions need to be achievable in the context of local circumstances, including their relationships with their partner organizations. PCOs will also need to take account of the research evidence indicating which types of intervention have been shown to be effective, if they are to maximize the benefit to their communities.

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References

- Abbott, S. and Gillam, S. 2000: Trusting to luck. Health Service Journal 110, 24-25.
- **Audit Commission.** 2000: The PCG Agenda: early progress of primary care groups in 'The New NHS'. London: Audit Commission.
- British Medical Association. 2001: Injury prevention. London: British Medical Association.

- **Department of Health.** 1999a: Primary care groups: taking the next steps. London: Department of Health.
- **Department of Health.** 1999b: Primary care trusts: establishment. the preparatory period and their functions. Leeds: Department of Health.
- **Department of Health.** 1999c: Saving lives: our healthier nation. London: Stationery Office.
- Department of Health. 1999d: National service framework for mental health. London: Department of Health.
- Department of Health. 1999e: Working in partnership: joint working between health and social services in primary care groups (PCGs). London: Department of Health.
- Department of Health. 2000: National service framework for coronary heart disease: modern standards and service models. London: Department of Health.
- Department of Health. 2002: Health and Personal Social Services Statistics for England http://www.doh.gov.uk/HPSSS/TBL_A3. htm (last accessed 27 August 2003).
- Elkan, R., Kendrick, D., Hewitt, M., Robinson, J., Tolley, K., Blair, M., Dewey, M., Williams, D. and Brummell, K. 2000: The effectiveness of domiciliary health visiting: a systematic review of international studies and a selective review of the British literature. Health Technology Assessment 4, 13.
- Hippisley-Cox, J., Groom, L., Kendrick, D., Coupland, C., Webber, E. and Savelvich, B. 2002: Cross-sectional survey of socio-economic variations in severity and mechanism of childhood injuries in Trent 1992-1997. British Medical Journal 324,
- Kendrick, D., Groom, L., Hippisley-Cox, J., Savelyich, B., Webber, E. and Coupland, C. 2003: Accidental injury: a neglected area within primary care groups and trusts? Health Education Research 18, 380-88.
- NHS Executive. 1998: Health improvement programmes: planning for better health and better health care. HSC 1998/167. London: NHS Executive.
- Nuffield Institute for Health, University of Leeds and NHS Centre for Reviews and Dissemination. 1996: Preventing falls and subsequent injury in older people. Effective Health Care 2.
- Pope, C., Ziebland, S. and Mays, N. 2000: Analysing qualitative data. British Medical Journal 320, 114-16.
- OSR International Ptv Ltd. 2000: OSR N5 Release V 5.0.
- Rowland, D., DiGuiseppi, C., Roberts, I., Curtis, K., Roberts, H., Ginnelly, L., Sculpher, M. and Wade, A. 2002: Prevalence of working smoke alarms in local authority inner city housing: randomized controlled trial. British Medical Journal 325, 998-1001.
- Secretary of State for Health. 1998: Our healthier nation: a contract for health. London: Stationery Office.
- Towner, E., Dowswell, T and Jarvis, S. 2001: Updating the evidence. A systematic review of what works in preventing childhood unintentional injuries: part 1. Injury Prevention 7, 161-64.
- Watson, M. and White, J. 2001: Accident prevention activities: a national survey of health authorities. Health Education Journal 60, 275-283.

Wilkin, D., Gillam, S. and Coleman, A. 2001: National tracker survey of primary care groups and trusts 2000/ 2001: modernising the NHS? Manchester: University of Manchester. Wilkin, D., Gillam, S. and Leese, B. 1999: The national tracker survey of primary care groups and trusts: progress and challenges 1999/2000. Manchester: National Primary Care Research and Development Centre.