

A public health approach to health needs assessment at the interface of primary care and community development: findings from an action research study

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This paper describes how a health needs assessment of a specified community was conducted using action research. The study involved local people and a multiagency steering group, within a primary health care setting. Community development approaches were applied because of the potential it has to address some of the fundamental issues that lead to poor health. A multimethod approach was used to gather data using quantitative and qualitative approaches. Six focus groups, with varying sections of the community, were used to elicit community perceptions of their health needs. Data triangulation was used in order to identify differences and similarities in each of the methods. The outcomes identified disparities in health needs between the areas assessed due to differences in socio-economic variances. One area experienced a greater level of deprivation using the Jarman index. The most common forms of ill health in the community were heart disease, cerebrovascular disease, asthma and diabetes. The assessment identified a need for more health promotional work to be carried out by health care professionals, i.e., annual health checks. A number of outcomes confirmed the existence of well-known difficulties in accessing health care, such as difficulties with physical distance to secondary care services, as well as the length of the waiting time at the outpatient departments. It was also apparent that there was a poor understanding of primary health care services and the role and function of the varying health care professionals, particularly amongst the ethnic minority population. The assessment highlighted a number of issues, including obvious benefits, which may accrue from this process for primary care groups and primary care trusts in identifying the health needs of their local populations and subsequent development of the health improvement programmes with the health authority. The discussion raises issues concerning the impact that these changes have on collaboration between varying professional groups and users of services in the planning and delivery of services in order to reduce inequality in health.

Key words: action research; community development; Health Needs Assessment; primary care; public health; user/community participation/involvement

Introduction

This paper describes how a health needs assessment was carried out in one community within one

north west region. The current practice of health visitors (HV), district nurses (DN), school nurses (SN) and practice nurses (PN) often involves undertaking some form of caseload profile of individuals or families and has become an established part of their role (Billings, 1996; Billings and Cowley, 1995; Cook, 1999; Luker, 1996). The subsequent development of this activity has resulted in collaboration between members of the primary

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10.1191/1463423603pc173oa

health care team (PHCT) to produce a profile which combines all the information held by each member of the team (Cook, 1999; Rowe, 1998). This collaboration is now useful in enabling PCTs to produce a profile of larger populations.

Government reforms, such as those contained in *Saving Lives: Our Healthier Nation* (DOH, 1999a), outline how health professionals' roles can initiate this public health approach, particularly concerning vulnerable groups. One perceived outcome is the reduction of variances in health outcomes (DOH, 1999a). It is anticipated that such work is undertaken in a more collaborative way, involving statutory and voluntary agencies. Health care is being increasingly viewed as everybody's business and furthermore, user involvement is firmly emphasized (DOH, 1999a). This document challenges the previous paradigm of the medical model of health care, proposing a broader model of sociocultural and economic dimensions, such as those in the Dahlgren and Whitehead (1991) model. As a consequence of this broader definition of health, HNA of populations will need to focus on both health and health care need, this shifts the traditional model from reactive service-driven to a more proactive needs-led approach (DOH, 1990; 1997; 1999a).

Background

This article describes how a health needs assessment was carried out as part of the Hyndburn HNA project (Horne, 1998). The community involved comprised of two wards and hence had a neat geographical location. The community was predominantly serviced by five primary health care teams (PHCT) – one fundholding, single-handed practice and four nonfundholding single-handed practices. All the PHCT expressed involvement with the project.

The aim of the project was to:

- Involve the PHCT in a process of HNA to identify and act on the health needs of a community.
- Develop the public health role of the health visitor.
- Incorporate local voices into the process of HNA.
- Examine the advantages of HNA as an approach in informing the commissioning of primary health care (PHC) services.

It was acknowledged that these aims could be achieved by planning and implementing practice-based approaches with each of the participating PHCTs. This would require collating all relevant epidemiological and demographic data, as well as planning and implementing techniques that include local people in identifying their health needs. It would also involve identifying key nonNHS workers and, in collaboration, develop and implement processes to identify neighbourhood health needs. It was envisaged that the HV's role, as project facilitator would form a key part of the overall monitoring mechanism. The project facilitator's role was to develop a pragmatic model of HNA that could be used by PHCTs.

Due to the potential benefits of collaboration between and amongst professional groups and agencies (Cernik and Wearne, 1992; DOH, 1999a; Twinn *et al.*, 1990), a multiagency steering group was formed to support the facilitator and effect changes as a result of the outcomes.

Literature review

It is evident from the literature, that there is an increasing focus on strategies for assessing needs which allow the use of multiple sources of data to interpret the diverse and wide-ranging needs that are found within the community (Billings, 1996; Carey, 1999; Rowe, 1998). HNA has evolved from its origins as a medical tool for assessing health care needs, into a more pluralistic process of exploring, from a multiple 'voices' perspective, both health and health care needs. The literature reveals that over the years HNA has been variously described as a process integral to raising consciousness (Marti-Costa and Serrano-Garcia, 1995), as well as a strategy for assessing needs (Billings, 1996). It has also been seen as a way of fulfilling need and demand for health care by populations in order to improve the effectiveness of health care delivery (Stevens and Gabby, 1991).

Within the NHS, assessment of health needs has been seen as a requirement of purchasing and commissioning authorities (DOH, 1990). More contemporary evidence, however, suggests that it is now viewed as an integral process by which primary care can respond to local and national priorities (DOH, 1997; 1999a; NHSME, 1992). Hence, HNA has a central role within contemporary health care

thinking, strategy and service delivery (Billings, 1996). Tinson (1995) points out that the move towards community-based health care, and more recently a public health approach to primary care, obliges nurses to adopt a more collective view of health and consider the wider and complex needs of the community.

The publication of the Acheson Report (DOHSS, 1988) prompted a renewed interest in HNA. The report proposed that directors of public health should be responsible for the HNA of their local populations. The subsequent publication of the NHS and Community Care Act (DOH, 1990) marked an explicit shift away from a 'service-driven' to a 'needs-led' pattern in the delivery of both health and social care. This shift was intended to address three basic issues that were problematic in the NHS at that time – professional dominance over resource allocation, lack of motivation for efficiency gains and failure to provide choice for the users of services (Harrison, 1996).

One approach to HNA in primary care has been the use of practice data to identify need. However, this can fail to recognize the needs of irregular attendees, nonattendees, such as the homeless or those with chronic mental illness (Jordan and Wright, 1997). Viewing HNA purely in terms of health care may actually detract from the wide-ranging influences that other factors have upon health in its broadest sense, i.e., housing, diet, environment, social class (Acheson, 1998; Townsend and Davidson, 1992; Whitehead, 1987).

Rapid participatory approaches (RPA) to health needs assessment have been used as a qualitative technique for community assessment (Bowling, 1997). The approach has also been used to establish the foundation for an ongoing relationship between service purchasers, providers and the public (Picken and St Ledger, 1993). RPA have also been applied to general practice to define both the health and social needs of communities (Murray *et al.*, 1994).

Another approach to HNA utilizes community development in an attempt to raise local residents' participation in community health activities, as well as gather perceptions of health, e.g., The Kendon Community Health Profile (Kennedy, 1993). This involved a multiple methodology incorporating epidemiological and demographic profiles with real life experiences of health and illness of residents in Drumchapel. These initiatives need to be

seen against a background of protracted changes in community nursing and NHS ideology which has resulted in a renaissance in the role of community nurses, particularly for HVs, in their public health role in the last decade (Billingham and Perkins, 1997; DOH, 1999a; 1999b). The emphasis on collaborative working in recent years (DOH, 1999a; NHSE, 1999) now challenges the previous and divisive paradigm of 'tribalism' among the health professionals and statutory agencies (Beattie, 1995). Hence, HNA as a process can assist with multiagency working and provide an effective means of delivering co-ordinated and integrated health promotional activity sensitive to local health and health care needs in an attempt to redress inequalities in health in its broadest sense.

Ethical issues

Ethical approval was sought from the local research ethics committee, but was not required as the individuals recruited were not patients, but volunteered their assistance in the identification of health needs. However, the facilitator was cognisant of the potential for coercion in such a situation. Participants were approached through local contacts and the focus group appointment was provided for a week later. Only when informed consent was obtained via the contact did the project begin. An ethics protocol was devised and shared with the focus group members prior to commencement to ensure that participants were aware of their rights, as well as the need for confidentiality. Participation was entirely voluntary; they were free to withdraw or refuse to answer any question at any time.

Conceptual framework

The framework of action research in the form of rapid participatory appraisal (Bowling, 1997), community-orientated primary care (COPC) (King's Fund, 1994), community development (WHO, 1991) and profiling for health (Billings, 1996; Twinn *et al.*, 1990) was adapted in order to develop a pragmatic model. This model incorporated the views of the community, as well as providing a tangible conceptual framework for the PHCTs involved.

Action research has been described as a method of participative investigation focused on 'generating knowledge about a social system while simultaneously trying to change it' (Lewin, 1946: 366). Its origins have been developed from social engineering to a method of community awareness raising and empowerment (Bowling, 1997), collaborative or participatory investigation (Grbich, 1999). Action research has also developed a tradition of being a 'process of enquiry, intervention and evaluation' which is pertinent when 'improved practices and problem solving are core concerns' (Grbich, 1999: 203). In relation to community nursing, action research may be seen as a useful strategy for raising awareness of community issues (Grbich, 1999).

Participation of the relevant PHCTs involved with the study was essential, hence COPC was viewed as an appropriate framework for this research. COPC has been described as an approach that attempts to promote better health through the strategic use of primary care resources, directed at those patients who are receiving treatment, those awaiting diagnosis and those at high risk (Freeman *et al.*, 1997).

Community development is a process by which communities, and the individuals within them, collectively define and take action on those issues that affect lives. As a process, it seeks to maximize community participation in the planning and implementation of health-enhancing activities (O'Gorman, 1996) embodying a commitment to holistic approaches to health (Adams, 1989). It also has the potential to address some of the fundamental issues that lead to poor health (Wass, 2000).

Integral to the conceptual framework structure is health profiling, which in itself is the basic tool of HNA. Profiling is the systematic collection of various data to identify health needs of specific groups or populations, which enable an analysis to be made of health needs, and subsequent health promotion strategies (Billings, 1996; Rowe, 1998; Twinn *et al.*, 1990).

Research design

The research design used action research in the form of rapid participatory appraisal (RPA) techniques based on the community health profile (CHP), used by Hubley (1982), as this would pro-

vide the flexibility to introduce varied data sources and multimethod approaches within its framework. Such an approach could also be used for data analysis and community needs assessment (Cernik and Wearne, 1992). The CHP has been described as an attempt to understand and describe the locality in order to prioritize need (Hubley, 1982) and has also been viewed as a 'snapshot' of the population, providing a systemic approach to assessing community health needs and resources (Cernik and Wearne, 1992). This approach has been used in nursing research for analysing data collected from CHP (Billings, 1996; Cernik and Wearne, 1992) and has obvious similarities in case study design (Yin, 1989).

RPA involved interviews with key informants – youth and community workers, local policemen, local Agenda 21 group members, nursery officer, civic society members, women's group members and voluntary workers – use of focus groups (FG) and observation of the area, to build up the profile and requires involvement of the PHCT.

FG were used to elicit community perceptions of their health needs. FG offered the potential for gathering a wider range of opinions and experiences by providing a practical way to study people's knowledge, opinions, ideas, feelings and motives about health expressed in their own words and experiences (Thomas *et al.*, 1992; Hennings *et al.*, 1996).

Data collection

A number of methods were used to collect data, including data indexes and the compilation of a community health profile using both qualitative and quantitative methods, which helped in analysing the social variables emerging from the study. The use of epidemiological and socio-economic data gleaned from the census provided evidence of social and economic differences between populations at a local level. The Jarman underprivileged area score (JUPAS) (Jarman, 1983) is a composite index calculated from eight weighted census variables. It was originally developed to indicate areas with a high demand for GP services, however it is also strongly correlated with other indicators developed to measure deprivation (Morris and Carstairs, 1991). High Jarman scores indicate deprived areas with lower scores occurring in affluent areas.

The index of local conditions (ILC) measured relative levels of deprivation (DOE, 1994). Scores of zero equate to the national average. A positive score indicates a high level of deprivation, whilst a negative score indicates relatively low levels.

The mental illness needs index (MINI) assesses need for inpatient mental health services based on a number of population characteristics – social isolation, poverty, unemployment, permanent sickness and temporary and insecure housing (Glover *et al.*, 1995). This is considered more appropriate than the Jarman scores in predicting admission prevalence in rural and urban areas (Glover *et al.*, 1995).

General practice profiles were utilized in the compilation of the community profile, in order to provide morbidity data and assist in determining priorities for both pro-active and reactive service care provision. Such profiles can outline the level of service, the state of nursing within it and act as a tool for setting aims and objectives for GP practices (Hugman and McCready, 1993).

Community nursing caseload profiles were utilized as they concentrated on the clientele of the community nurse. They have been described as the analysis of all individual records held by each community nurse according to certain health dimensions to identify characteristics and trends, highlighting individual and family need, facilitating prioritization and the targeting of health promotion work (Drennan, 1990; Hunt, 1982).

Data information was collected and compartmentalized using the information profile designed by Annett and Rifkin (1990) (Figure 1) which is

based on the ‘Health For All’ philosophy of equity, participation and multisectorial approach (WHO, 1991). The information was subsequently compiled into a community health profile. Empirical data were also collected from discussions with health care professionals (HCP), community workers, voluntary workers and other key informants.

Community perceptions of their health needs were obtained from six FG discussions with varying sections of the community – young women’s group (aged 13–16), young men’s group (aged 13–16), Asian women’s group (aged 20–60), Asian men’s group (aged 20–60), middle years group (aged 30–55) and an older people’s group (aged 60–85) – with each focus group consisting of between eight and 12 volunteers.

As RPA information is predominantly qualitative in nature (Ong, 1993), secondary sources of both a quantitative and qualitative nature were required to triangulate the key emerging issues to form a community assessment (Figure 2).

All the data sources were collated into a ‘portfolio’ in order to achieve a multiple perspective dimension to the HNA process (Beattie, 1991). Themes were extracted from this ‘portfolio’ of data and were combined to support the themes emerging by a process of triangulation (Robson, 1993). The findings of the HNA were taken back to community groups and leaders to assess credibility. An evening workshop was organized to present and share the three main themes emerging from the HNA and elicit co-operation and partnership in progressing solutions to these themes with the steering group members, community leaders, PHCT,

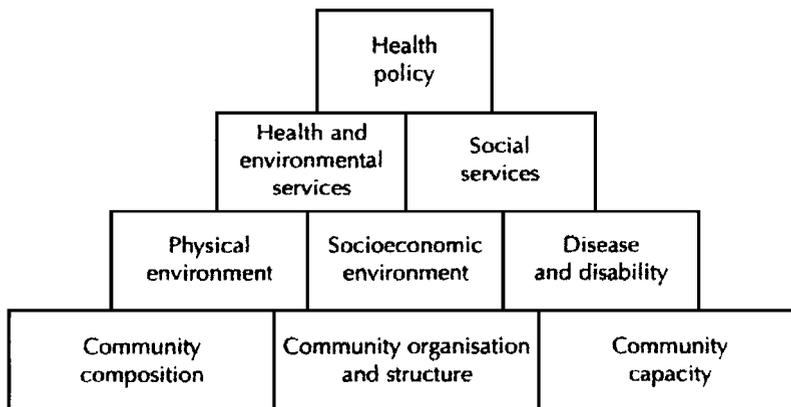


Figure 1 Rapid participatory pyramid (Annett and Rifkin, 1990)

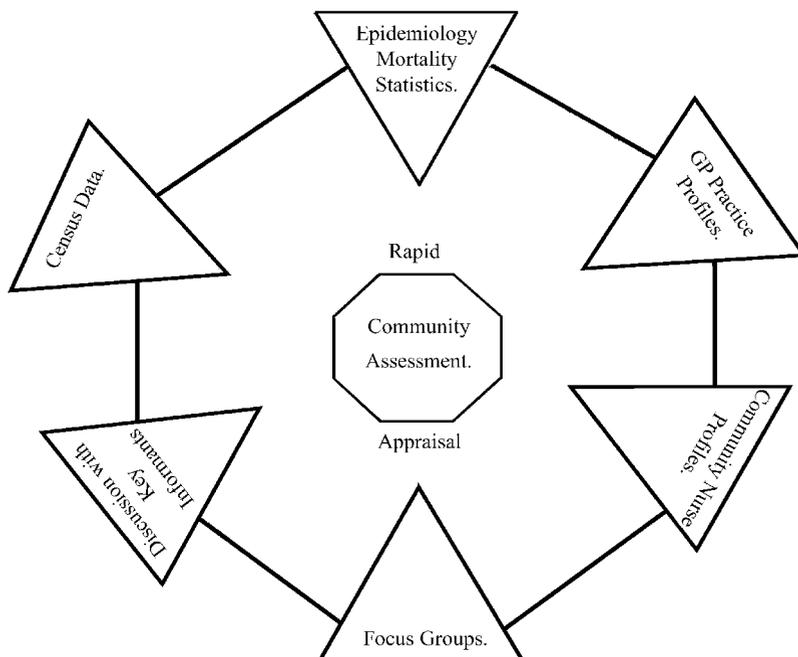


Figure 2 Methodological overview of the HNA project (Horne, 1998)

councillors and, most importantly, members of the community itself.

Data analysis

All the data sources, outlined in Table 1, were collated into a portfolio as a means of organizing and managing the data (Beattie, 1991). The portfolio contained quantitative and qualitative data including data from the focus groups, which was audiotaped and transcribed. The transcribed material was read and reread in order to draw out emergent features of the FG interviews following a process described by Morgan (1988). Themes were extracted from this 'portfolio' of data and combined to support the themes using triangulation, whereby one source of information was tested against others as a form of crossvalidation, thereby improving the quality of the data and the accuracy of findings (Robson, 1993).

Outcomes

From sources of information derived from mortality rates, morbidity and lifestyle data, the most common forms of ill health in the community were heart disease, cerebrovascular disease, asthma and diabetes. The prevalent lifestyle issues were obesity, excess alcohol intake and smoking. Three themes emerged from the analysis which were classified as health and health services, health and neighbourhood and health and youth.

Health and health services

From sources of information derived from mortality rates, morbidity and lifestyle data obtained from GP practice profiles, the most common forms of ill health in the community were heart disease, cerebrovascular disease, asthma and diabetes. The prevalent lifestyle issues were obesity, excess alcohol intake and smoking.

From focus group discussions, discussions with key informants and feedback from community groups it was apparent that there was a need for

Table 1 Overview of methods and data sources utilized in the compilation of the community health profile

	Type of data	Purpose
Action research	Rapid participatory appraisal	To determine, with the community, local health needs in its broadest sense
Qualitative	Focus groups Key informant interviews	Provide more depth and insight on health needs Obtain local views on health needs and reaffirm original findings
	Feedback sessions from various community groups	As above
Quantitative	Census data	To establish the vital statistics of the population involved – demography and community composition
	Small area epidemiological data	Establish standardized mortality ratios for various diseases in the area of the project and to establish mortality patterns
	Jarman underprivileged area scores	Establish relative levels of deprivation and affluence
	Index of local conditions ^a	As above
	Mental health needs index	To predict admission prevalence for inpatient mental health services
	Crime figures	Establish level of crime
	Housing data	Establish housing type
	Multiple debt information GP practice profiles	Establish debt levels Establish morbidity patterns within the population
Nursing caseload profiles	Establish and prioritize health needs on various caseloads	

^aReplaced by the 1998 index of local deprivation (DOETR, 1998).

more health promotional work to be carried out by HCP, i.e., annual health checks, more leaflets and advice in this area. One woman eloquently stated that:

The health service isn't a health service.
They wait until you are ill to do something.
It's an ill health service.

- Need for alternative forms of treatment being available and for a counselling service at GP practices (operational from February 1998).
- Waiting times for GP appointments was felt too long, i.e., desire for same day appointments.
- Physical distance to secondary care services was considered an issue, as well as the length of waiting time at outpatient departments.
- Poor understanding of primary health care services and the role and function of the varying HCP, particularly amongst the ethnic minority population.

Health and neighbourhood

The information derived from data triangulation revealed that one ward was generally more deprived than the other (using Jarman index and index of local conditions) (Table 2).

Ward A also had a higher standardized mortality ratio for heart disease and stroke, as well as higher than district average for the following indicators for deprivation for:

- More than one person per room. Ward A 3.38 (5th/17 wards), Hyndburn 2.57.
- Households without a car. Ward A 35.52 (8th/17 wards), Hyndburn 43.67.
- Households without a bath or inside WC. Ward A 2.01 (2nd/17 wards.), Hyndburn 0.88.
- Households without a bath or inside WC. Ward A 1.00 (2nd/17 wards.), Hyndburn 0.42

There were three enumeration districts within ward A which were slightly more disadvantaged than the rest of ward A (Table 3).

Table 2 Indicators of deprivation for ward A, ward B, Hyndburn and East Lancashire Health Authority

	Jarman underprivileged area score	Index of local conditions
Ward A	20.25	2.234
Ward B	-6.7	-7.808
Hyndburn locality	14.12	—
East Lancashire Health Authority	12.27	2.609

The Jarman score and index of local conditions values – the value of 0 represents the mean score for England with positive scores indicating more disadvantaged areas and negative scores less disadvantage.

Table 3 Indicators of deprivation for the most deprived enumeration districts of Ward A

Enumeration district (ED)	Jarman underprivileged area score	Index of local conditions
ED X	36.27	6.37
ED Y	30.76	2.45
ED Z	30.36	4.21

The Jarman score and index of local conditions values – the value of 0 represents the mean score for England with positive scores indicating more disadvantaged areas and negative scores less disadvantage.

In these areas the particular problems were identified from an amalgam of data sources as lack of suitable playing facilities, generally poorer housing stock and poorer environmental area. The community also had the second highest debt per capita (Citizens Advice Bureau, personal communication).

Health and youth

Focus group information obtained from young men and women suggested the following problems:

- General dissatisfaction with the GP services, not only in relation to waiting times of appointments but that they felt that they were not ‘listened to’ during appointments, and unable to confide in their GP.

- Violence was an issue for young men in particular, i.e., street gangs.
- Generally felt that there was not much to do in the area except ‘hang out’ on the streets.

Information obtained from an amalgam of data sources highlighted general concern for the youth of the community within the following areas:

- They are perceived as threatening/intimidating because they ‘hang out’ in large groups on the streets and in the park.
- There had been numerous telephone calls to the police with regards to juvenile nuisance.
- Poor recreational facilities.
- Inadequate play areas for young children in parts of ward B.
- Health care professionals perceived under 20 year olds as a vulnerable group in terms of sexual health.

Action resulting from the assessment process

Health and health services

- Provision of more practice-based health promotional programmes, health bus, public health at the market place, Asian health awareness days and outreach work where appropriate. The health bus has been to the community and was manned by an HV and a doctor. Initial evaluation showed an extremely good response to such a service. 100% wished the bus to visit on a regular basis.
- A counselling service was commenced at GP surgeries just prior to the findings of the study. Between six and ten sessions are offered before referral to other agencies is considered (dependent on individual practitioner). This service will need to be monitored in order to assess impact and whether it is meeting the need.
- Parenting group instigated to look at normal growth and development, sleep and behaviour, nutrition and play.
- Establishment of the ethnic health and welfare group. This was professionally led to enact the necessary changes needed to improve access to appropriate information, pursue identified health and welfare needs, via a multiagency approach, for the community of Hyndburn. Intended to

be used as a user group and to educate users on the roles of varying health and welfare professionals.

- Development of a healthy living centre bid within this community.

Health and neighbourhood

- Instigation of a credit union – work carried out via prospects panel (local Agenda 21 group) as a result of the project.
- Appropriate outreach work by HP from the health centre.
- Close liaison between health services and local authority regarding regeneration, environmental and housing developments within the area.
- Information from the assessment shared with the local authority in their single regeneration bid 5.
- Establishment of the ward A working group – prospects panel and civic society.

Health and youth

- Collaborative venture with Hyndburn Borough Council, youth and community service, prospects panel and police in developing children's playground and teenagers recreational facilities within the area.
- Development of healthy living centre bid which incorporates the development of drama and arts for the youth to increase self-confidence, self-awareness and encourage individuals to make informed choices and positive individual and collective action.

Discussion

Haggstrom (1970) hypothesized that 'communities' had two images. One viewed the community as an object – a network of interdependent systems, bureaucratic organizations, interest groups, political parties, and so forth, which is acted upon. The second, an acting community – which identify their own needs and problems, participates in decision making and engages in collective action.

This study represented a valid professional approach to involve the community/service users that came nearer to Haggstrom's vision of an 'acting community'. Some tensions did exist between agencies, professionals and community members

in prioritizing the findings of the HNA, particularly the resource implications such a process entails, in order to effect the action plan on identified needs. Such tribalism has been deemed as detrimental to achieving positive outcomes to the needs of patients, clients and communities (Cooper, 2000). The study attempted to search for the broader issues, which are conducive to the enhancement of health. The process of HNA was used at the interface of primary care and community development. The working boundaries between primary care and community development are merging for both community health professionals and other agencies, in addressing inequalities in health and developing viable communities consistent with a 'sense of coherence' (Horne, 1999).

Incorporating public involvement in HNA poses problems as to what counts as evidence. The principle distinction between professional knowledge and lay knowledge is that the latter is very often experiential (Stacey, 1994). The medical profession views only the most rigorous data as acceptable – the so-called 'hard' as opposed to 'soft' data sources. Despite this, the public perspective can be very beneficial in compiling a community profile on health needs (Hawtin *et al.*, 1994).

The emphasis of any effective health care system should be on meeting the basic needs of each community and the provision of services that are easily accessible and acceptable to all, involving full community participation (Twinn and Cowley, 1992). Community perspectives are vital in processing a community needs assessment, as valuable insights into their experiences and perceptions of health need from their viewpoint are provided (Ong and Humphris, 1994). This provides a starting point to partnership approaches, gaining local support and ownership, together with providing direction for the project. Broader frameworks for health explain how health is created and maintained, as opposed to strictly focussing on the negative aspects of illness and disorder. This is consistent with a 'sense of coherence' from a salutogenic perspective (Antonovsky, 1987; 1993). Salutogenesis concerns the production of health (Antonovsky, 1987; 1993).

It is acknowledged that co-operation and partnership between experts, consumers and community leaders are essential, if the aims of social and program change are to be realized (Bracht,

1991). This philosophy extends to research, such as the process of HNA. Chavis *et al.* (1983) acknowledged the difficulties involved in returning research and facilitating its utilization, but accepted that it could have important ethical, social and scientific benefits.

This study demonstrated how primary health care teams were able to identify local health needs with involvement from the community towards the development of a public health approach to primary care sensitive to local needs and requirements. However, approaches to community involvement in HNA and participation in decision making vary. This is an area that will require further work.

The involvement of community representatives, PHCTs, HPs, voluntary and statutory agencies, made it possible to develop a co-ordinated approach to identifying and addressing some of the needs highlighted through the process. Resource implications in both staff time and funding extra resources need to be thought through to avoid community dissatisfaction in such a process. Most of the identified needs for this community were placed into a healthy living centre bid in an effort to create financial fluidity to effect the necessary changes. This bid was unsuccessful.

Craher (1996) argues that the focus of general practice and the setting of the PHCT has limited the role of community nurses, focussing their work around general practice, as opposed to the broader issues of PHC. However, with the instigation of PCGs/PCTs and the existence of a public health strategy (DOH, 1999a), tensions between general practice work and community work for the health of the local population should dissipate within the broader framework for health outlined by the health improvement programmes. However, it is acknowledged that difficulties will remain.

Limitations

The sources of data collection used in the study were diverse and drew together a complete picture of local health in its widest sense. With any source of data collection there will always be limitations and this study was no exception. Community nursing profiles, within the area of this study have a tendency to be altered from 1 year to the next. The inconsistency in data collection has made interpret-

ation impossible over time. This concurs with the findings of Cowley *et al.* (1996). Compiling GP practice profiles was problematic due to the inconsistency of paper-based systems and computer recording between GPs and within the individual practices, with the result that there may be under- or over-reporting of morbidity and lifestyle data. These findings are consistent with those of Scobie *et al.* (1995) who found that computer recording of problems was inconsistent. Completeness and accuracy of whatever system used may be called into question (Unwin *et al.*, 1997). Hence, one may question the true validity in utilizing GP practice information within HNA if these criteria are not achieved. A standardized recording system would improve such data collection assuming diagnostic practices are the same. However, in reality there will be differences in diagnostic practice, prescribing and referral patterns (Unwin *et al.*, 1997).

Limitations of mortality data are well known, particularly in relation to the difficulty in ascribing single causes of death, especially in the elderly where several disease processes are a possibility (Unwin *et al.*, 1997). Mortality data are only approximately related to the morbidity treated in general practice and small scale data mortality indication are subject to inaccuracy because the number of deaths occurring each year may be too small to establish statistically significant differences between areas in levels of mortality (Curtis and Taket, 1996).

Measures, such as the JUPAS score, are based on established links between deprivation and ill health (Jarman, 1983; 1984). But, they are unable to inform purchasers/commissioners on the particular health needs of a population and the appropriate level of service provision (Buchan, 1990). Evaluations of both the selection of data sources and the approaches to data collection have not been exposed to sufficient evaluation (Thomas, 1997). As the methods used to profile populations vary, problems of comparability either within or between the profiles of various providers remain problematic and this was particularly true of GP and nursing caseload profiles. This concurs with Billings investigations into the process of community profile compilation (Billings, 1996).

Whilst the findings of the study do not in any way constitute generalizable data, the outcomes of the study are indicative within the context of the study.

Conclusion

This study has demonstrated how HNA may be conducted at the interface between primary care and community development through a public health approach. The need to develop such an approach to primary care was deemed necessary in order to address the acknowledged wider determinants of health in a multidisciplinary manner. The necessity to work in this way is supported by contemporary health policy which views collaborative work as vital in reducing duplication of work and maximize efforts and resources in an attempt to reduce inequality in health in its broadest sense (DOH, 1999). The contemporary policy focus on health and primary care has been developed from the basic principles of the Alma Ata declaration (1978), promoting a stronger public health orientation to both local and national health systems (Carlson and El Anarsri, 2000). Implicit within modern public health are three strategies which emphasize the social dimension of public health – improving social conditions that stimulate health, preventing social conditions that threaten health and neutralizing existing conditions that cause ill health (Van der Maeson and Nijhuis, 2000). Consequently, approaches to HNA will need to continually develop methods of balancing epidemiological evidence and socio-economic appraisal with that of community/population perspectives of health needs, based on pragmatic and experiential knowledge.

It is recognized that in areas where multi-agencies are involved, cautious handling as to the varying interpretations and approaches to 'need' are required for effective intersectoral collaboration and appropriate provision of services for users (Lightfoot, 1995). This calls for joint training in some areas so that varying professionals can understand each other's work and that each holds a common, focused joint strategy for the improvement of health and reduction of inequality. Community consultation is paramount in defining those issues that affect their lives and in establishing appropriate services, which are socially and culturally acceptable. This assists in redressing inequalities in both the quality and access to health care services and combine action on the social determinants that impact on the health of individuals and communities.

Primary Health Care Research and Development 2003; 4: 340–352

Acknowledgements

Maria Horne would like to thank the community members, especially the local Agenda 21 group, where the HNA was conducted. Also, many thanks to Professor Alan Beattie who provided supervision and support during her MA dissertation from which this paper is extracted.

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