Vertical equity in service provision: a model for the Irish public health nursing service

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Aims. This paper analyses the policy and conceptual basis of public health nursing service provision in the Republic of Ireland and situates it within an international context. It draws on the principles of horizontal and vertical equity in proposing a new model of public health nursing service provision. It gives the reader an understanding of a model of service delivery underpinned by the principle of vertical equity.

Background issues. The Public Health Nurse in the Republic of Ireland has a wide remit encompassing primary, secondary and tertiary care at the level of the individual, family and community. The changing sociological and demographic nature of society in Ireland has impacted on a service that has largely remained unchanged since 1966. Since 1997 four review bodies have provided recommendations that are incompatible with each other. There remains a need to find a solution to the overwhelming demands placed on the public health nursing service in the Republic of Ireland.

Key issues. The public health nursing service goes beyond the provision of a purely clinical nursing service. Communities differ in demography, epidemiology, environment, history, composition, support and most importantly needs. Using three exemplars a new model for the public health nursing service is explicated. This model has as its main focus the needs of the community it serves.

Conclusions. A service underpinned by the principle of vertical equity can be used to deliver locally based, needs driven public health nursing services. The application of such a model would make the public health nursing service more flexible and responsive to local need. Public health nursing composition and provision must be determined using the principal of vertical equity determined by the needs of the community it serves.

Keywords: horizontal equity, vertical, policy, service provision, needs, public health, nursing, community, Republic of Ireland, funding

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Introduction

Achieving an equitable health service has been a key principle underpinning the delivery of health services in the Republic of Ireland since 1994 [Department of Health (DoH) 1994]. It is suggested here that in respect of the Irish public health nursing service, this principle has not been attained. Further, we suggest, the basis for funding the public health nursing service is fundamentally flawed because its focus is on the provision of a horizontally rather than vertically equitable service. Horizontal equity of service provision, defined by Carr-Hill (1994, p. 1190), is 'concerned with equal treatment for equal need'. Vertical equity is 'the extent to which individuals who are unequal in society should be treated differently' (Carr-Hill 1994, p. 1190) or, as Mooney (2000, p. 204) writes, 'vertical equity is about the unequal but equitable treatment of unequals'.

Currently, the sole criterion of total population size as the basis for public health nursing service provision means that each population (of approximately 2500 people) served by an individual Public Health Nurse (PHN) is assumed to be homogeneous, i.e. to have equal need. Given the impact of social, economic, demographic and epidemiological differences on the need for a public health nursing service, a mechanism for service provision that assumes homogeneity in service need is untenable. Rather, we suggest here that the provision of a public health nursing service, for any given population, should be based on the needs of that population. In practice, this means recognizing that the public health nursing service is a broad-based multifaceted service provided to a multiplicity of client groups, where the focus may be on the individual, family or community. There is a tension therefore for the PHN who must understand the wider picture but also know and be involved with the particular.

Current public health nursing service

Public Health Nurses are the only nurses universally available in the community in the Republic of Ireland [DoH 1997, Commission on Nursing (CoN) 1998] and the public health nursing service is therefore synonymous with PHNs. The educational and experiential preparation of PHNs takes a minimum of 8 years and includes a general nursing, midwifery and public health nursing qualification as well as a minimum of 2 years of clinical practice.

The client groups to be provided with a public health nursing service were identified more than 30 years ago in a circular issued by DoH (1966). These client groups include:

- elderly persons;
- families with infants and children (including preschool and school children);
- clients who need clinical nursing care (including those with a terminal illness);
- clients with a psychiatric illness; and
- clients who are intellectually and physically challenged.

The focus of the service may be on primary, secondary or tertiary public health nursing care. Primary public health nursing care involves promoting and enhancing growth potential by providing anticipatory care. Secondary public health nursing care involves responding to identified need and tertiary public health nursing care involves rehabilitation or health maintenance (McMurray 1993). Each of these different foci may occur in isolation, but more often they take place in conjunction with each other. For example, the tertiary public health nursing service to an individual client with a leg ulcer may involve dressing that person's leg. It may, however, also include nutritional and other lifestyle advice (primary public health nursing care) as well as the employment of a home help to assist with household duties (secondary public health nursing care).

A visit to a family with a new infant to a health centre may result in the provision of advice and support regarding breast-feeding (primary public health nursing care) but may also include a developmental examination of the infant (secondary public health nursing care) and dressing a maternal caesarean section wound (tertiary public health nursing care). It may involve inviting the mother to take part in a breast-feeding support group, set up in partnership between the PHN and mothers themselves (primary public health nursing service at community level). In other words, the public health nursing service may have many foci, may be enacted with many different client groups, and may take place in many different settings. The key to the provision of the public health nursing service is to understand the need for the service at the point of delivery. In a public health nursing population where there is a high proportion of older people and a very small number of new births each year there will not be a need for a breast-feeding support group. There may, however, be a need for meals on wheels, home help service and/or clinical nursing service. In short, the needs of any individual public health nursing area will determine the components of the public health nursing service in that area.

The DoH (1997, p. 34) write that 'While PHNs are ''specialist'' under World Health Organization (WHO) definitions, in the provision of both preventive and a curative service to the community, their scope of practice is broad'.

For the most part, these broad-based services will be delivered personally by a PHN, who may work completely

alone in some rural areas or from a clinic base that houses other PHNs in more densely populated parts of the country. However, it remains unusual for the service to be delivered through delegation or formal collaboration with other team members. We are saying here that in order to meet the principles of vertical equity greater delegation, formal collaboration and co-ordination must take place.

Others employed in the public health nursing service

The service provided by any given PHN is influenced not only by the needs of the community but also by the level of other services (both nursing and non-nursing) provision. A study undertaken on the public health nursing service in 1994 (O'Sullivan 1995) demonstrates little evidence of the presence of Registered General Nurses (RGNs) working within the community. By 1998, the CoN (1998, p. 156) made a recommendation that 'where registered general nurses are employed in the community it should be in a permanent capacity in line with service need'. In general, there is much anecdotal evidence that where RGNs are employed in the community, it is often on a temporary, part-time basis and across the country there is no evidence that RGNs are employed on the basis of service need.

Home care attendants are employed in some health board areas [Eastern Health Board (EHB) 1998]. Little is known of this service or of the way in which it contributes to the overall public health nursing service. It is likely, however, that home care attendants make a substantial contribution in the area of personal care including bathing, toileting, dressing and shaving. In some health board areas, home helps may also be employed through the public health nursing service (Kelleher 1995), although again there is evidence that their organization differs across the country (EHB 1998). Where home helps are employed, their work is generally focused on household duties, such as food preparation, cleaning and shopping.

The DoH (1997) have recommended that:

> …the formation of teams which would be composed of the area public health nurse, one or two registered general nurses and home care attendants/home helps on extended duties (p. 24).

This recommendation however seeks to apply the principle of horizontal equity. If each public health nursing service has equal service providers, in this case a PHN, an RGN a home care attendant or a home help on extended duties, then the assumption must be that each population served has equal need. This is clearly not the case. In a community with high population growth, where large numbers of young families have migrated, the greatest public health nursing need will not be in clinical nursing or personal care. It will be in the general area of family support and community development. In such a population, a home help on extended duties, an RGN or a home care attendant will not be in a position to meet the greatest need of that community although the community would have a horizontally equitable service.

Other community nursing services

Other nurses work in the community in addition to those who work within the public health nursing service. In some community care areas, community psychiatric nurses (Sheridan 2000), learning disability nurses (Sheerin 2000) and palliative care nurses may be employed (Igoe *et al.* 1997). In general, however, they operate within the structure and organization of their own institutional setting. Community psychiatric nurses, for example, have a reporting and administrative relationship within the framework of the psychiatric services and learning disability nurses within the framework of the learning disability services. Practice nurses may also be available in the community but they are always attached to general practitioners. A small number of maternity hospitals operate a community midwifery scheme (Mulcahy & Dempsey 1999) but, by and large, PHNs are the only midwives involved in postnatal care of families with new-born infants. In practice, where other nurses/midwives are not available, client group responsibility is met by the public health nursing service.

Other nurses working in community do so in isolation from the public health nursing service. The interdependence of the public health nursing service with other service providers in the community is considerable and often determines both the components and level of public health nursing service provision. Inconsistency in the availability of others leads to unpredictable demands on PHNs because they have no control over what specialists or other personnel who may be operating in the same locality as themselves. When this is coupled with communities who are not homogeneous with each other, the impact is such that the service provided cannot be equitable. Communities with the greatest need do not necessarily receive the greatest level of service.

Vertical and horizontal inequity

Where other services are not available, for example a home visiting community psychiatric service, home-hospice care service, or community midwifery postnatal visiting service, responsibility for the provision of a service for each of these client groups lies with the public health nursing service. This creates a situation of both horizontal and vertical inequity.

A mother with a new infant living within a specified number of kilometres of a maternity hospital in one part of

the country may be visited daily by a hospital-based midwife for up to 10 days after discharge from hospital. A mother with a new infant living 1 km beyond that specified distance of the same maternity hospital will not be visited daily for 10 days because the service does not extend to that part of the community. At an individual level, mothers who have relatively equal needs are not provided with an equal service because one receives more visiting than the other (because it is unlikely that a PHN could provide the same level of home visiting as a community midwife). At a community level, a population provided with a community midwifery service may have only a small number of families with new infants. An area without a community midwifery service may have a high number of families with new infants and may therefore have a greater need for a community midwifery service (vertical inequity).

In such situations PHNs, because of their educational base as well as their intercommunity knowledge, would know the need for a community midwifery service, or indeed any other service. They would also know that need relative to other communities. The public health nursing service can therefore provide a mechanism through which local needs can be identified and can focus the service on meeting those needs. PHNs who understand the needs of their area have the capacity to take action and manage the day-to-day needs of that area. They should also be given the capacity to develop a structure that through co-ordination and delegation can meet those same needs.

In summary, PHNs provide a broad-based public health nursing service to clients living in the community. Irrespective of the needs of the community, PHNs may (or may not) be supported in their work by RGNs, home care attendants and home helps. In addition to the public health nursing services, other nurses may also work in the community. Their focus, role and assigned responsibilities vary according to specialist area and institution to which they are attached.

International comparisons

An examination of the organization of community nursing service is now undertaken and this is particularly concerned with the organization, focus, client group responsibility and entitlement to service. In Sweden, for example, the district nurse has responsibility for the entire population within a geographically defined area although, with an average population size at 1500–2000, this is considerably smaller than that of the Irish PHN (Timpka *et al*. 1996). Norway has a separate health visiting service for families with children (Ellefsen 2001). In Belgium and Germany, home nursing and baby care are organizationally separate (Van der Zee *et al*. 1994) and care is undertaken by different nurses. The United Kingdom has organizationally separate services for those who need a clinical nursing service (district nurse), those who need community midwifery services (community midwife), and health-promoting services for the 'well' population are provided by health visitors and school nurses (Kelly 1996).

Kerkstra and Hutten (1996), in a survey of home nursing services across the European Union, found that in seven European countries home nursing is mainly provided by one type of organization, in three countries by two types of organization and in five countries by three or more types of organization. In continents other than Europe, community nursing services are organized in an equally diverse way. Public Health Nurses in Hong Kong are attached to family health services, where responsibility for child health, maternal health and family planning lies (Twinn & Shiu 1996). These PHNs are therefore organizationally separate from services for other client groups.

The Canadian public health nursing service, in one region at least, shifted from a generalist delivery of service in the late 1980s to one where services were provided according to target population programmes. These programmes include parent–child, school age, adolescent, adult and seniors (Black *et al*. 1991). A similar shift occurred in Finland following implementation of the 1972 Finnish Public Health Act (Oinas *et al*. 1999). In Australia, change has taken place in the opposite direction. McMurray (1993, p. 22) writes that in Australia the role and function of the child health nurse has historically been separate from that of other community health nurses, but that now some child health nursing functions are 'being integrated with those of generalist community health nurses'.

More recently, the WHO has proposed the development of a curriculum to support the education of a family health nurse who would '(B)e able to work confidently and competently with individuals, the family and the community as well as with other disciplines and other sectors' and provide 'primary, secondary, tertiary and crisis intervention care' (World Health Organization 1999, p. 3). This nurse would have a generalist role, be assigned to a geographical area, and have responsibility for multiple client groups. In short, this nurse would be similar to the Irish PHN.

In summary, the role and responsibilities assigned to community nurses differ according to age or specialist area and to the country under study. The extent to which specialization has occurred in any given country appears to be dependent more on the legislative and historical context than on systematic implementation of organizational or

management theory. This is also true of the Irish situation where, despite changes in society and therefore in need, there has been little agreement about the best mechanism for public health nursing service provision in response to that need.

Proposed changes in service

Since the early 1990s, publicly funded services in the Republic of Ireland have come under increasing scrutiny and this is particularly the case in respect of the health services [DoH 1994, Department of Health and Children (DOHC) 1999]. There is general agreement that despite enjoying a 'well-deserved reputation for quality and excellence' [Commission on the Family (CoF) 1998, p. 40] the public health nursing service in Ireland needs to be re-examined in terms of its organization, delivery and focus (CoN 1998).

Since 1997, four review bodies (DoH 1997, CoN 1998, CoF 1998, Denyer *et al*. 2000) have made recommendations and suggestions for the organization, structure and function of the public health nursing service. The review bodies have had as their focus:

- nursing services (CoN 1998);
- public health nursing services (DoH 1997);
- the family (CoF 1998);
- child health services (Denyer *et al*. 2000).

Each of these reviews focuses on the way in which future community nursing services should be structured and recommendations made are, as they stand, incompatible with each other. The recommendations made by each of the review bodies regarding the structure of the service can be summarized as referring to

- the role and assigned responsibilities of the PHN (assignation);
- the extent to which other workers are included in the provision of the PHN service (support).

The role and assigned responsibilities of the Public Health Nurse

Both the DoH (1997) and the CoN (1998) recommend that the public health nursing service should retain its generalist focus and have responsibility for the provision of a service to multiple client groups in the community. The CoN (1998, p. 154) writes

> The PHN should remain focused on a district or area meeting the curative and preventive nursing needs of the population within the area. The commission envisages the PHN continuing to be responsible for people of all ages and of every condition.

The DoH (1997, p. 24) recommend

> (t)he retention of the current system based on the PHN as a family nurse within a geographical area.

According to CoN (1998, p. 24), such a model of service delivery would be more coherent than one where 'there are a proliferation of specialists' and 'consequently a danger of increased fragmentation of the community nursing service'. Such fragmentation, they suggest, would be a particular problem in rural communities.

The report on the CoF (1998, p. 40) has suggested that PHNs be assigned to an area of expertise:

> Individual nurses should be given the opportunity to develop a particular expertise, for example in family support, child healthcare, care of the elderly, or palliative and terminal care. To some extent this happens. The demography of particular populations dictates the main work of the PHN in that area.

This model of service delivery, according to CoF (1998), would maximize the potential of the service and enhance the key role currently played by PHNs in family support. Denyer *et al*. (2000) make their recommendation in the context of an overall review of the child health surveillance programme in the preschool and primary school age group. In relation to the specific role of the PHN they write:

> We recommend that community nursing services for infants and preschool children be delivered by community child health nurses, and for school children by school nurses. PHNs, by virtue of their training, would be suitable for such positions (Denyer *et al*. 2000, p. 42).

These contradictory recommendations for PHNs illustrate vividly a paradox faced by health professionals throughout the developed world. The enormous growth in professional knowledge and technical advances in all fields means that whilst there is more in common across health care roles than ever before, there is also a need for more specialist knowledge within each role. Inter-professional teamwork, with different team members all holding a common core of knowledge and each making a specific contribution to the overall task of the team, is one way forward (Cowley 1994, Anderko *et al*. 1999). It is not however, one that has been picked up in the various reviews about how the public health nursing service should be provided.

There remains a need to find a solution to the overwhelming demands on PHNs stemming from the increasing level of technical knowledge required to meet all the needs that they may encounter in the working week. Further, the provision of other nursing services in the community needs to be planned in a way that takes account of the current public health nursing service, so that services are equitable according to the needs of any given area.

Support within the service

An increase in the amount of support within the public health nursing service is now considered as a way of providing an equitable service in the future. This has been proposed by both the DoH (1997) and the CoN (1998), although in both reports the focus is only on those who require clinical nursing or personal care. In other words, not all aspects, components and foci of the public health nursing service are taken in to account. The CoN (1998, p. 157) recommends that 'such nurses (RGNs) should be employed in support of the public health nursing service as part of the community nursing team'.

The CoF (1998, p. 41) allude to the notion of vertical equity. The commission writes

> It is suggested that criteria such as population profile, which takes account of the need in an area, would allow for a better match of resources with needs. Relevant factors might include the age profile and geographical spread, the population density, the socio-economic conditions and the community and social support available in an area'.

For the public health nursing service to be vertically equitable two assumptions must be met. These are:

- The public health nursing service goes beyond the provision of a clinical nursing service in the community.
- Communities are not homogeneous. At a local level communities differ in their demography, epidemiology, environment, history, social and economic composition, support structures, stability, and needs.

Any vertically equitable model of public health nursing service delivery must be underpinned by these two assumptions. When these are taken in to account, the public health nursing service provided will be different across different communities, and will comprise different components, foci and personnel with different skills. In short, it will be a public health nursing service that is tailor-made for the community in which it operates.

It is accepted here that 'need' is a contested concept and that service provision based on need requires considerable in-depth discussion and debate. The physical presence of PHNs within local communities, however, as well as their interaction on a day-to-day basis with individuals and families within communities means that PHNs are in a position to identify broad public health nursing needs locally. For the purposes of this paper, broad areas of need (such as clinical nursing needs, child health needs, community development needs) are used to illustrate the notion of vertically equitable service.

Exemplar 1

Community A is a quiet suburban community, with a population of about 5000 people. It is a settled community with little movement into or out of the area. Many of the residents have lived there for generations. It is a close-knit community. There is a meals on wheels service set up by volunteers and partially funded through the health board. It is a community with a higher than average resident population of older clients. The number of infants born each year in the area has decreased over the last 5 years and last year 32 new babies were born. The vast majority of households have two parents living there, both of whom work outside the home. There is one primary school in the area with about 400 students.

In this community, the greatest public health nursing need will be in relation to the higher than average population of older persons. There will be a need for an RGN to provide clinical nursing care and a home care attendant to provide personal care. The PHN will also contribute to care provided in the home. In addition, the PHN may join with other service providers, for example, general practitioners, local clergy, local business people as well as health board personnel, in developing a day care centre within the area. The PHN will provide a service for families with infants and young children in the home and clinic. She may, over time, work with mothers in developing a breast-feeding support group for the early postnatal period. The stability of the area may mean that mothers already know each other and her role may therefore be confined to service initiation. She may also decide that, given the decrease in new births and the fact that most parents work outside the home, that clinic days and times need to be altered. The PHN may, in conjunction with the principal of the local school, implement a health promotion 'smokebusters' programme (Figure 1).

The public health nursing service in community A is relatively uncomplicated. The PHN co-ordinates the public health nursing service and is therefore at the core. A home care attendant (HCA) has primary responsibility for personal care of people and may also be assisted in this by a RGN. The RGN has primary responsibility for clinical nursing care but may also be assisted in this by the PHN. The PHN has primary responsibility for family health, school children's needs and community development work, and may be assisted in community development work by HCAs and RGNs because of their day-to-day contact with people in the community.

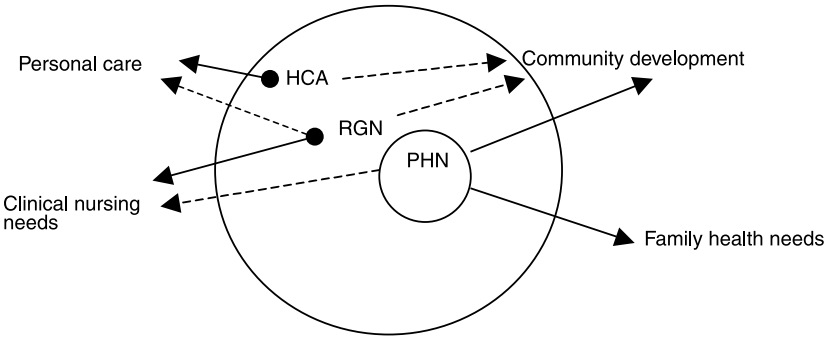

Figure 1 Community A. (⟶) Main person involved; (- - -▶) may contribute to this part. RGN: Registered General Nurse; PHN: Public Health Nurse; HCA: Home care attendant.

Exemplar 2

Community B was a rural community until 5 years ago. Since that time several new housing estates have been built and these incorporate a high number of starter homes. Consequently, there has been a vast increase in the number of families with young children moving into the area. Some families have had new babies since moving there. The vast majority of families are not indigenous to the area and live here only because the housing is affordable and they are within commuting distance of their place of work. They have no ties or links with the area. The people who have lived in the area all their lives feel overwhelmed by the sudden increase in the population. The only local amenities are a church, sports pitch, small hall and school that now has insufficient classroom space for the children.

The overriding feature in this community is its recent rapid population growth, with young families presenting the greatest public health nursing need. This may highlight the need for development of support structures such as mother and toddler groups, education with parentcraft classes, and support with breast-feeding and behaviour management. In such a community, the availability of a RGN or a home care attendant would be horizontally equitable. It would not, however, be vertically equitable because the population with the greatest need would not receive the greatest level of service. Vertical equity ['the extent to which individuals who are unequal in society should be treated differently' (Carr-Hill 1994, p. 1190)] in such circumstances would mean that the public health nursing service is provided by a PHN, community development officer (CDO), lactation counsellor (LC) and midwife (Figure 2).

In community B the PHN remains at the core of the model, and the midwife/RGN has main responsibility for the infant health needs. The PHN and Lactation Counsellor (LC) may support this. The PHN has primary responsibility for the child/family health needs as well as school health needs, and also has the main responsibility for clinical nursing needs but is supported in this by the midwife/RGN. The community development needs are met by the CDO and PHN jointly.

Exemplar 3

Community C is in the inner city, and there has been a massive influx of asylum seekers and displaced persons of various European and African origins. Alongside this there is an on-going problem with substance misuse. There are a high number of bed and breakfast accommodation units. The population is transient and language is a difficulty. There is also tension between this group and the local indigenous population who previously formed the hub of this community prior to the change described. Although some growth and regeneration has taken place here in recent years, the over-riding feature is that it is a fragmented community.

In community C the PHN remains at the core of the model. The PHN has primary responsibility for child/family health needs as well as school health needs. The RGN has main responsibility for meeting clinical nursing needs and is supported in this by the PHN. The home care attendant has responsibility for personal care and may be supported in this by the RGN. Family needs in this community are both complex and common. The PHN is supported in delivering a public health nursing service to families by a home maker (household duties) and family resource worker. Where families are affected by addiction problems, the community psychiatric nurse can assist. Both the PHN and the specialist nurse for refugees provide a public health nursing service to this client group (Figure 3).

These examples are not intended to be exhaustive or even comprehensive. They merely illustrate the principle of vertical equity where the public health nursing service is determined by the needs of the population. Locally based teams with the PHN at the core, supported by other personnel, provide a public health nursing service.

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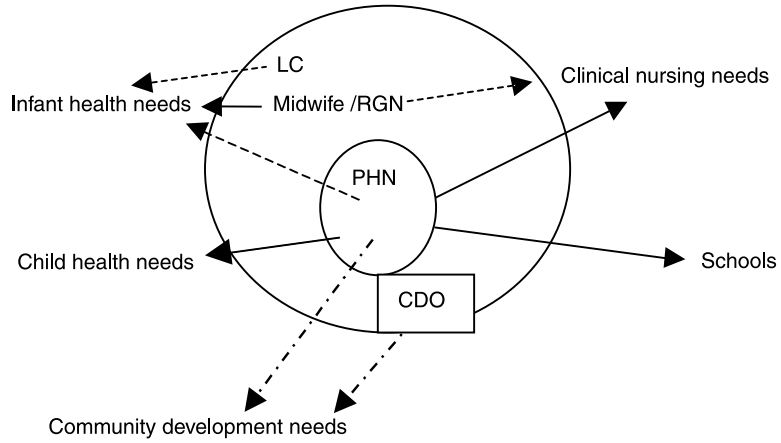

Figure 2 Community B. (⟶) Main person involved; (- - ⟶) may contribute to this part; (–·–·⟶) joint responsibility.

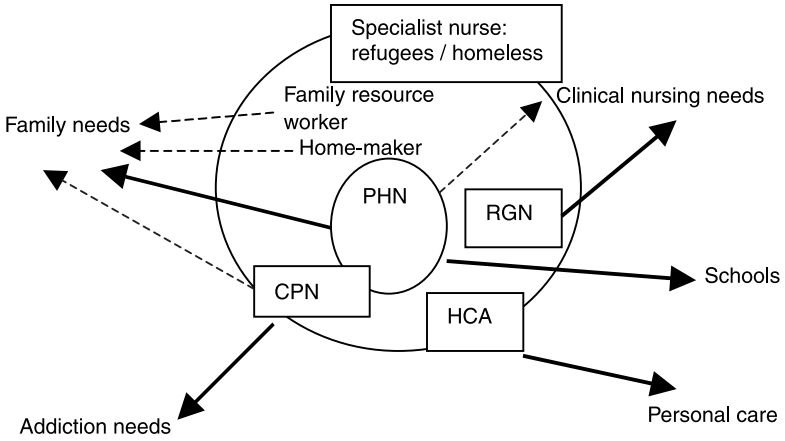

Figure 3 Community C. (⟶) Main person involved; (- - ⟶) may contribute to this part.

In this way a service that is focused on the needs of the population can be provided. In doing so the service can positively discriminate towards clients with greatest need in that particular area that is it can be vertically equitable. The involvement and remit of each team member with any given client group will be contingent on the particular skills, expertise and experience that person brings to the team, as well as the particular skills, expertise and experience of the other team members. It is not envisaged that in every area every team member will be available in a full-time capacity.

Conclusion

In conclusion, this paper has discussed the current organization of the Irish public health nursing service within a framework of equity. It has concluded that the public health nursing service and the PHN are not synonymous. Further, it has suggested that the very substantial social and demographic changes that have taken place in the Republic of Ireland mean that the PHN must be supported by others in the delivery of a public health nursing service. A new model of service delivery is proposed. Two assumptions underpin this model: first, that the public health nursing service is a diverse, broad-based one that operates at the level of individual, family and community; secondly, that communities are not homogeneous and their needs therefore are not homogeneous. If the principle of vertical equity is to be adhered to (and it is proposed here that it should) then public health nursing service composition and provision must be determined by the needs of the community.

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