

SOUTH AUCKLAND COMMUNITY PAEDIATRIC NURSING SERVICE: A FRAMEWORK FOR EVALUATION

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Abstract

This paper describes the Kidz First™ paediatric community homecare nursing team in South Auckland. While the service was not initially planned as an integrated approach to child health, its evolution reflects the move to more community based care delivery and the expansion of nurse-led initiatives in New Zealand.

The components of a community paediatric home nursing team as described by Eaton (2000) are used to provide the framework with which to describe the service. A focus group held with the Kidz First™ paediatric community homecare nurses has enabled definition of the key nursing components provided to children and their families living in South Auckland.

Key Words: Paediatric nursing, community, home healthcare, ambulatory care

Introduction

A paediatric home care nursing team has been established in South Auckland with a focus on co-ordinating care in the home situation. This service, Kidz First™ Homecare, has evolved over time from initial beginnings as a paediatrician-led outpatient service, to become a family focused nurse-led service centred around the child in their home environment. The service is evolving rapidly in response to local needs of a culturally diverse population.

Home healthcare services for children have developed rapidly in a number of countries. A recent paper (Eaton, 2000) indicates that by 1996 there were over 150 paediatric community nursing services in England. In New Zealand the number of such services is unknown. The principle that children should only be admitted to hospital if the care they require cannot

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be given at home is a factor in the establishment of home health care services. The World Health Organisation (WHO) has long argued that the best place for sick children is at home, among familiar surroundings, where those who provide security and affection are able to tend to their needs (WHO, 1947). In addition, the New Zealand Child Health Strategy holds as one of its key principles that, "child health and disability services should be available as close to home as possible within the bounds of quality and safety" (Ministry of Health, 1998, p.7). This strategy further notes that "emphasis should be placed on community-based or outreach services wherever possible and appropriate." (Ministry of Health, p.18). Paediatric home care has been shown to reduce emotional trauma in children, decrease anxiety in caregivers and children, make more effective use of limited health service resources and reduce the incidence of healthcare-associated infection (Jennings, 1994; While, 1991). For chronically ill children, further advantages include care provided according to the child's abilities and age, parents maintaining care for their child, the integration of the ill child into his or her family and social environments and the family being supported in the process of accepting the illness (Kohlen, Beier, & Danzer, 2000). However, in the present era of evidence based healthcare, there are further critical issues related to clinical and cost effectiveness of services. For those providing the service, it is essential to evaluate the quality of the service in order to improve it and confirm the effectiveness. There is minimal

literature regarding effective models of paediatric community nursing services (Eaton, 2000). Most services have been developed to bridge gaps between primary and secondary services, rather than as a planned strategic response in order to develop an integrated child health service to meet identified local needs (Winter & Teare, 1997).

Background

The Location

The service described is located in South Auckland, a culturally diverse urban area where approximately 10% of New Zealand's children live (104,000 children aged 14 years or under) (Jackson, Palmer, Lindsay, & Peace, 2001). Of these, children of European descent account for 38%, with a further 26% being Maori and 25% Pacific. Over one-third of the population within the area have living conditions that fall within decile groups 9 and 10 - the most deprived 20% of the country (Jackson, et al., 2001). Compared with the rest of New Zealand, South Auckland has a high rate of poverty-related and sometimes preventable diseases, such as respiratory infections, meningococcal meningitis, cellulitis and other skin infections, rheumatic fever and tuberculosis (Clark, et al., 1999).

Services

A group of 16 nurses are now part of the Kidz First™ Homecare (KFHC) team. The KFHC nurses are experienced paediatric nurses who provide specialist nursing support for children and families in the home setting. They work in liaison with other services to provide

comprehensive care and support in three distinct areas.

- **Neonatal care.** The neonatal care component involves provision of specialist nursing care for, and follow-up of, medically complex high-risk babies. The service includes supportive care for caregivers and babies in the transition period from hospital to home until discharge to a well child provider or transfer to the chronic/long term care team.
- **Acute care.** The acute care service provides safe follow-up within the community, for children aged 0-15 years who have been admitted acutely and discharged 'early' from the Kidz First™ Children's Hospital. The aim of visiting these children is to prevent them having to return to hospital for further treatment. Specialist nursing care is provided for approximately 2,000 children with respiratory illness, gastroenteritis, febrile illness, and cellulitis per year. This range of conditions reflects four of the ten most common Diagnosis Related Groups (DRGs) for children admitted to hospital in South Auckland (Walker & Trenholme, 1996). Home visiting is generally carried out for up to 72 hours post discharge before hand-over to the primary health care practitioner and linking on to well child providers.
- **Chronic/long term care.** The chronic/long term service is directed at children aged 0-18 years who have significant chronic personal health and/or disability needs, and who require intermediate or long-term specialised nursing. They are

children who health professionals have designated as medically fragile and/or technology dependent (e.g. require oxygen, feeding systems, respiratory support). Examples of care provided for this group include nursing case management, palliative care (often shared with hospices or other providers) and apnoea monitoring for babies at risk or who have had a life-threatening event.

Other children cared for by the paediatric homecare nurses include those who do not totally fit the criteria for acute or chronic care, but where there is an identified need for assistance, and for whom a difference can be made relatively quickly, for example eczema management or where a child is failing to thrive.

While child health services in South Auckland had for some years included a 'Children's House' where paediatricians conducted outpatient clinics with the assistance of nurses, an attempt in the 1990s to improve the follow-up of children resulted in an expansion of the nursing component. Initially the focus was on children who failed to attend outpatient clinics and support for any child receiving oxygen at home. In 1995 assistance for neonates in transition from hospital to home was established and, as time went by, further child health priorities became evident. Prior to the expansion of the service, the average length of stay in hospital in South Auckland was 50% lower than the national average for children with acute illnesses. It was believed that, potentially, this resulted in many re-admissions and so a

primary goal of this expansion was to make a safe transition of children from hospital to home and reduce hospital re-admissions (Walker & Trenholme, 1996).

The nurses provide a family focused service which is centred around the child within their home environment. This has contributed to a comprehensive overall approach to child health. Initially the nurses provided intervention based upon 'standing orders' and under the direction of paediatricians who were on call to discuss issues as they arose. Now the nurses assess and frequently meet health needs relating to whole families such as referrals to family support services and interaction with other health care providers. The overall focus of the service is on safety of children and support for families whilst being culturally aware of the diverse population.

Service evaluation

Evaluating the service in order to improve it and confirm its effectiveness is a priority. Describing the components of the KFHC nursing service and clarifying the nursing framework are essential initial steps in order to establish a strategy for evaluation.

Service components

Eaton (2000), in an analysis of the international literature, identifies ten components of a community paediatric home nursing service: qualifications of nurses; communication networks; willingness and ability of parents to provide care; resources; clinical responsibility; accessibility; referrals;

teaching of students; cost-effectiveness and evaluation. These components encompass and provide a useful framework for a description of the South Auckland paediatric community nursing service - 'Kidz First™ Homecare (KFHC).

Qualifications of nurses. It is essential that nurses working within child community nursing services have appropriate training in paediatric/neonatal, and community nursing, and experience with sick children. The KFHC nurses are all senior paediatric nurses practising at a specialist level. While most have specialist professional qualifications in paediatrics, several are now also undertaking postgraduate study.

Communications networks. One of the main issues in the care of children in the community setting relates to communication problems. When the boundaries between secondary and primary care are blurred it is important that all members of the multi-disciplinary team are informed about the child's care. The KFHC nurses have very broad networks throughout South Auckland and the wider community. These extend from the hospital paediatric wards and emergency department to paediatricians, general practitioners, tertiary centres and many community and cultural groups.

Willingness and ability of parents to provide care. The role of the nurse in home health care for children may be to support the family to care for their child, or to provide actual nursing care in the home. It

is often assumed by health professionals that the parents are willing and able to cope with any care in the home setting. In South Auckland suitability is largely determined by the hospital where it is recognised that discharging a child with an inappropriate home environment into the care of the KFHC team could potentially be unsafe. Distance from the hospital is also taken into consideration. Children discharged early following an acute illness must live within a radius of approximately 40 minutes driving time of the hospital. Education of parents forms a key part of the nurse's role, for example nurses teach parents to undertake simple procedures and also how to identify signs and symptoms that would precipitate a call or hospital visit for assistance.

Resources. Funding for equipment and timely access for acquiring equipment and other resources is an important consideration. As KFHC is part of Counties Manukau District Health Board (CMDHB) the supplies and necessary equipment required to provide the paediatric homecare service are factored into contracts and budgets. These are under the control of the KFHC Co-ordinator. Overnight computerised oximetry equipment to assist in oxygen monitoring and weaning is funded by the CMDHB with some other equipment supplied under a contract from a private home-care rental company. Team resources supplied by the DHB include mobile phones and computers and air-conditioned fleet cars which are equipped with oxygen, suction equipment, baby scales and anaphylactic kits.

Clinical responsibility. Establishing who has clinical responsibility for a child cared for in the community is essential. The KFHC nurses have individual clinical responsibility and accountability for working within their professional scope of specialist nursing practice. This involves ensuring key people/professionals are kept clinically informed (e.g. general practitioners, paediatricians, neonatologists) of a child's progress. Overall accountability for the acute referral service delivery rests with the hospital, through the paediatricians, until formal discharge and handover to the primary health care providers. For children with chronic conditions, and for neonates, a general practitioner and specialist paediatrician or neonatologist share the medical care responsibility.

Accessibility. In an ideal situation services would be available 24 hours a day. In South Auckland the hours of the service are 08.00 to 16.30 seven days per week, with KFHC nurses available until 18.30. Expanding the hours of the service beyond this is not practical within available resources. In special situations the nurses make individual arrangements for families, for example where a child is receiving palliative care. This may include remaining on call themselves or linking into a 24 hour palliative care provider. All families have the team phone number and a clear action plan provided by the KFHC team, which includes information on where to take their child after hours if emergency assistance is required.

Referrals. Referrals to the KFHC service primarily occur directly from

the hospital, with some from midwives or well child nursing services. To date there have been no direct referrals from general practitioners. This is due largely to the high number of general practitioners in the area (approximately 300) and difficulties with contractual arrangements and associated cost factors likely to arise when there are so many primary care providers. Planning is in progress to improve the integration between secondary-based services (including KFHC) and general practitioner-led primary health care services, as well as building on links to well child care providers. The introduction of the District Health Board is facilitating this integration.

Teaching of students. A further component of a community paediatric nursing service is that related to responsibility for student teaching, although Eaton (2000) indicates that this is rarely mentioned in the international literature. Most weeks the KFHC nurses will have one or two undergraduate nursing or medical students working alongside them in an observational role. Also hospital staff or other professionals who wish to accompany a paediatric homecare nurse for a period of time as part of their professional development are encouraged to do so.

Cost effectiveness. Whilst costs are clearly an essential consideration, Eaton (2000) points out that schemes reporting on cost effectiveness produce conflicting information, and that research in this area is required. Her analysis is that there is a notion that caring for sick children at home is more cost-effective than hospital

care, however factors which are taken into account in published studies are quite variable. While ensuring that a service is cost effective is clearly essential, in South Auckland an economic evaluation of paediatric homecare has not been undertaken. The service does however have a budget determined by the individual contracts and must meet outputs and targets within tight budget parameters.

Evaluation of services. Although there are various reports in the literature (Eaton, 2000) where attempts to evaluate services have been made, this is an underdeveloped area. Eaton considers satisfaction of parents, children and staff to be the minimum evaluation parameters. Further evaluation parameters identified by the authors of this paper include clinical audit across the three distinct service areas (acute, chronic and neonatal) together with systematic audit of aspects that affect the manner in which the overall service may be delivered (for example telephone availability and usage). The impact on health outcomes may include evaluation of potential markers such as hospital readmission rates, medication compliance and service utilisation details.

Nursing framework

In addition to a description of the service, clarifying the nursing framework was an initial step in proposing an approach within which to undertake nursing service evaluation. In order to clarify the nursing framework a focus group was held with all the KFHC nurses towards

the end of 2000. Due to the rapid service expansion there had been little time for the nurses to reflect on the key elements of their practice, and thus gain insight into the difference they made to the children in their care. Reflection can provide a purposeful and goal-directed basis for understanding attitudes and emotions, and thus for incorporating new ideas and information (Street, 1994). The aim of the focus group was therefore for the nurses to articulate and reflect on what they did during the course of their work, and identify key elements of their practice. Focus groups have been described by Kreuger, Nelson and Wolanin (1988, p.18) as a “carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive non-threatening environment”. From the focus group it was expected that some understanding of how the nurses may be making a difference to the health of children in South Auckland would emerge, and the fundamental purpose of the services provided would become clearer. Trigger questions were used to guide the focus group, with the nurses being encouraged to describe the care they had been providing for a child during that week.

The authors of this paper analysed the focus group discussion, identified key components of care and confirmed the key components with the nurses. It is intended that the elements or key components of care identified by the nurses can provide the basis for the nurses to evaluate their service.

Key service success factors identified by the nurses included: keeping

families at home, ensuring families remain together, keeping children in their own environments, enhanced communication with families and the wider health provider network, ability to determine other health issues and enabling families to develop confidence in health service provision. The nurses believed that these success factors led to a holistic model of care and co-ordination for families involved with the service.

Key elements or components of care exhibited by the KFHC nurses were identified from the focus group discussion. The KFHC nurses have specialist nursing and other knowledge and skills, combined with advanced assessment skills, interpersonal skills and communication expertise, along with the technical skill required to plan and manage care for children. The latter includes monitoring and evaluation of health status and co-ordinating care for children and their families, in addition to educating, teaching and linking with counselling services for families under stress. These elements are consistent with the competencies of an expert nurse as described by the Nursing Council of New Zealand (1999).

Extensive knowledge. Extensive knowledge bases include knowledge of paediatric care, specific child therapies such as play therapy and diversional therapy, and child protection issues (legal and ethical knowledge and understanding); as well as understanding of pathophysiology and appropriate treatments. The KFHC nurses have extensive knowledge of other services

(including health, social and education) and access current information on disease processes and treatment options. Keeping abreast of emerging information and developments is a key requirement of the nurse's role which requires attendance at regular update sessions, professional forums and access to current databases and literature.

Advanced assessment skills.

Advanced assessment skills are critical. Children and families are referred to other services where appropriate. Many situations are complex and the nurses judge when urgent referral is needed or, for example, when to remove intravenous access and complete intravenous antibiotic therapy.

Interpersonal and communication skills.

Interpersonal and communication skills require the establishment of trusting and supportive relationships with family units, empowerment, and advocacy for both children and their families. The nurses reported that an ability to empower families is critical to their role, helping families to have the confidence to cope with complex and demanding requirements. Culturally appropriate communication is essential due to the diversity of ethnicity and language amongst the families that the nurses deal with, and this often involves use of interpreter services. Communication may include leading multi-disciplinary team meetings and/or advocating for a child and their family within a variety of settings and with a range of agencies. It is important that the

nurses understand the need for counselling of children and families under stress, and that they have the skills to deal with such situations. These may include bereavement counselling and supporting families where a child is facing a life-threatening illness (which may involve more than one child), and where parents may be unable to cope with a dying child and may even be contemplating suicide. Referral to other services in such situations is appropriate and the nurses sometimes maintain contact with bereaved families, attend funerals and other significant occasions when appropriate, and provide support.

Technical skills. The technical skills required for the role of the paediatric homecare nurse are extensive, and the nurses have a high level of technical competence (including skills to manage gastrostomies, tracheostomies, epidurals, intravenous therapy, pain and other symptoms). An ability to determine when and how to access resource experts is also required.

Planning and managing care.

Planning and managing care for children and their families includes problem solving, taking prudent risks and being accountable for actions and outcomes. The nurses rapidly anticipate situations, use innovative approaches and are flexible and adaptable in order to plan and manage complex care. This may include initiating therapies.

Co-ordination. Co-ordination of care for children and their families includes collaborating with a wide

range of providers and health related agencies including educational facilities and social agencies. This involves use of extensive internal and external networks, excellent problem solving skills, advocating for families and ensuring that family health needs are appropriately met. The latter includes ensuring attendance at clinics, arranging for follow-up, reassessment with specialist paediatricians and agencies and readmission to hospital where this is needed. In addition the nurses coordinate supplies and establish what equipment may be needed and from where this may be sourced.

Monitoring and evaluation.

Monitoring and evaluation of health progress may include ordering diagnostic tests, following up laboratory results and making decisions about therapy, for example utilising overnight computerised oximetry data to alter oxygen therapy requirements.

Education and teaching. Education and teaching of parents and others associated with care, such as school teachers, includes specifically educating in respect of areas such as nutrition, hygiene, lactation and ensuring an understanding and ability to use equipment. Many of the children in the 'chronic' group may be 'technology dependent' and teaching in order to ensure safety of the child is critical, and a key success measure for the nurses. In addition the nurses provide broad health education and health promotion for the whole family. This often occurs informally and is achieved directly as a result of the rapport and trusting

relationship that the nurses have with the families.

Conclusion

The South Auckland paediatric homecare nursing team is unique in New Zealand. It is dynamic and evolving and the nurses are providing leadership that promotes an innovative approach to child health. Clearly the service fills a gap between primary and secondary care, the integration of which is increasingly important in today's health care environment. Currently children are referred to the nursing service only through tertiary and secondary providers, however planning has commenced for primary health care practitioners to also refer to the service.

The KFHC nursing team is providing a model of healthcare for children that incorporates much of the vision encompassed in the Child Health Strategy (Ministry of Health, 1998) and the New Zealand Primary Health Care strategy (Ministry of Health, 2001). Attention is given to cultural issues, safety is paramount and the service revolves around teamwork that is multi-disciplinary, collaborative and links hospital care with community care.

The description and identification of the components of the service and clarification of the nursing framework provide a basis for an evaluation of the service.

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