Evaluation of the child health service: report of the sub programme evaluation group on child health

EVALUATION OF

THE CHILD HEALTH SERVICE

REPORT OF THE SUB PROGRAMME EVALUATION

GROUP ON CHILD HEALTH

EASTERN HEALTH BOARD

FEBRUARY 1996

MEMBERS OF COMMITTEE

Dr. Maire O'Connor (Chairperson), Community Care Area 10, Eastern Health Board.

Mr. Adrian Charles, Community Care Programme, Eastern Health Board.

Dr. Catherine Hayes, Health Information Unit, Eastern Health Board.

Dr. Sean McCarthy, G.P. Unit, Eastern Health Board.

Ms. Margaret McGahern, Finance Department, Eastern Health Board.

Mr. Tom Mernagh, General Hospitals Programme, Eastern Health Board.

Ms. Annette Murphy, RICHS Information System, Eastern Health Board.

Dr. Evan Murphy, Community Care Area 8, Eastern Health Board.

Ms. Teresa Scully, Community Care Area 9, Eastern Health Board.

The work of the group was greatly facilitated by many colleagues, especially Ms. Breege Carroll, Dr. Eileen Connolly, Dr. Derval Igoe and Ms. Samantha Rayner.

CONTENTS

CHAPTER 1

INTRODUCTION

INTRODUCTION

The brief of this committee was "to indicate the measures which the Eastern Health Board (EHB) proposes to use in assessing the effectiveness of its child health services". The Board provides a huge range of services for children - health promotion, disease prevention, primary, secondary and tertiary care, child support and maintenance. It is only possible to provide a cameo view of the services taking account of their complexity and the time constraints on the committee.

It is neccessary to distinguish between health services provided for children living within the Eastern Health Board and services provided by the Eastern Health Board. As most of the secondary and tertiary services and many of the support and maintenance services are provided by agencies other than the Eastern Health Board, it is not appropriate to view services provided by the Board in isolation.

CURRENT POSITION

The Eastern Health Board was established under the Health Act 1970. It has three programmes - general hospitals, special hospitals and community care. During the 1980s, the structure and process for different services changed to varying degrees. As a result, global outcome and even output/activity measures alone are difficult to interpret in the absence of structure and process detail.

By definition, measures of effectiveness must take account of structure, process and outcome. Until recently, attention was focussed on output and activity rather than on outcome. This occurred for many reasons including insufficient information, the problem of deciding on outcome measures, the relative lack of focus including the setting of goals and targets, and the system of allocating resources.

There is a need to carry out a periodic review of the direction in which services are developing and to redefine priorities. The Department of Health's strategy document "Shaping a Healthier Future" set out to do this. The health strategy is underpinned by the three key principles of equity (uniform rules for service eligibility and charges, measures to reduce waiting times, special attention to disadvantaged groups), quality (technical details and consumers' perceptions) and accountability. The document drew attention to six weaknesses in the current service. These were an important influence on the work of this committee and they are summarised here:

- Many of the services lack sufficient focus on goals/targets and it is difficult to assess their effectiveness - the required information is either unavailable or underutilised;
- Insufficient attention has been paid to tackling the main causes of premature

mortality;
- Waiting times for certain services are too long;
- There are inadequate linkages between complementary services;
- Community-based services are not yet developed to the extent that they can complement and substitute for institutional care or provide for the dependent in the community;
- The organisational and management structures need to be updated to provide for more effective decision making and accountability.

METHODOLOGY

Key factors which influenced the work of the committee were determination not to repeat previous work, the potential extent of the brief and the time frame allowed. Through our work, we hope to provide a stimulus for further studies.

To minimise the risk of repeating previous work, the three Dublin universities with schools of nursing and/or medicine, the Faculty of Public Health Medicine and each Director of Community Care/Medical Officer of Health were contacted to outline the nature of the brief and to request details of previous or current relevant studies.

As mentioned elsewhere, measures of effectiveness tend to concentrate on outcome measures and these are influenced by processes and structures. This, the time frame and the direction of the health strategy document determined the various study areas.

CONCLUSION

Functions which will influence measures of effectiveness for future services include:-

(a) Changing services in line with policies of the Department of Health, e.g. immunisation services, review groups on pre-school and school health services, and public health nursing.

(b) Changing health needs and demography.

(c) Indicators of health and welfare of children (including infant morbidity and mortality, diet and nutrition, surveillance and early detection of disease, prevalence of chronic and infectious diseases, maternal health, emotional and behavioural disorders, lifestyle, stress, education, history, housing standards, social inequality and unemployment). These health indicators and their health service equivalents will dictate current and future information needs, availability and, in turn, evaluation of the effectiveness of services.

CHAPTER 2

DEMOGRAPHY AND STATISTICAL FRAMEWORK

INTRODUCTION

In order to develop and analyse measures to assess the cost effectiveness and efficiency of the child health services provided by the Eastern Health Board, it is first neccessary to review the demographic profile of children within the Board's area and to summarise statistics in relation to the provision, quality and uptake of services.

In this analysis we quote approximate figures deduced from statistics published in the reviews and documents produced by the Department of Health, the Eastern Health Board and the Central Statistics Office. This approach gives a clearer picture of numbers of children and uptake of services in the various categories.

POPULATION

The Eastern Health Board comprises counties Dublin, Kildare and Wicklow. It is divided into ten community care areas, eight in Dublin, and one each in Wicklow and Kildare. In the 1991 census, the Board was found to serve a population of 1.24 million people, or one-third of the population of the Republic of Ireland. 16% of the population, or almost 200,000, were children under 13 years, and this is the age group to which the child health services provided by the Board are currently directed.

The total number of live births per year within the Board's area is approximately 18,500. Since 1980, there has been a steady decline in the national birth rate, but the rate of decline in Dublin, Kildare and Wicklow has not been as steep. It is probable that the 1996 census will show a reduction of up to 2% in the numbers of children under 13 years in these three counties. Therefore, the child health services provided by the Board should cater annually for a population of approximately 180,000.

SOCIO-ECONOMIC STATUS

Children from households below the poverty line are at considerably greater risk for all causes of morbidity and mortality. Social studies have found that unemployment is the single most important cause of childhood poverty, and that larger families, single-parent families and younger parents also feature strongly.

In Ireland, possession of a medical card is an indicator of material deprivation. In the Eastern Health Board, the percentage of children covered by medical cards ranges from 20% in the better-off areas to 50% in the less well-off areas. 30% of under 5's are covered by medical cards, rising to 33% in the age group between 5 and 15 years, reflecting the increased economic pressures created by older children and teenagers.

Therefore, 60,000 children within the Board's area live in materially-deprived families, and 120,000 live in better-off, though not neccessarily affluent, families.

PROVISION OF SERVICES

Standards by which the provision of services can be judged are difficult to identify. They are subject to the vagaries of location - city parts of the Board's area can be served more easily, while scattered country areas cannot - and staff availability.

In the school health service, an average of almost 90% of schools in urban parts of the Eastern Health Board area have an annual school medical examination. This percentage drops to an average of 20% for schools in country parts, reflecting the greater numbers of smaller schools and the greater distances and longer staff-travelling times between schools. Analysis of waiting lists for developmental examinations produces almost similar average figures - city areas operate almost 90% of required clinics, while country areas have such widely varying waiting lists and numbers of non-attenders that statistical analysis cannot give any reasonable or fair picture.

UPTAKE OF SERVICES

There are many services provided under the umbrella of the child health service. Appointment systems have been developed in some services, enabling assessment of uptake. The nine-month developmental examination, offered to all children in the Eastern Health Board area, has uptake rates which vary from one community care area to the next but which, in general, averages 75%. Similarly, MMR vaccination, which is given to children of 15 months old, has an average rate of uptake of 76%. Lower income areas consistently produce lower uptake rates, while areas of affluence produce percentages above the average. It is reasonable to extrapolate that three out of every four children regularly avail of the child health service. 25% of children default and many come from among the 60,000 whose families live in poverty.

CONCLUSION

In summary, 180,000 children under 13 years live in the Eastern Health Board area. One-third of these live in households where income is below the poverty line. The characteristics of their families include unemployment, single parenthood, young parents and large numbers of children. To achieve a more equitable and cost-effective service, resources should be specially targetted on these families.

The child health service reaches three out of every four children in the Eastern Health Board area. The biggest obstacle to uptake is social deprivation. Overcoming this will neccessitate allocation of resources and personnel to areas of greatest need.

CHAPTER 3

MATERNITY AND INFANT CARE SCHEME

INTRODUCTION

The maternity and infant care scheme was introduced to integrate the antenatal and postnatal care provided by family doctors with that provided by obstetrical hospitals. Mothers can, if they wish, attend both obstetrical outpatient departments and their general practitioners during and immediatelty after pregnancy. The scheme also allows family doctors to remain in contact with their patients during pregnancy.

CURRENT

The scheme provides for the delivery of antenatal and postnatal care services free of charge to the mother and infant by their general practitioner. It was extended to cover all women in 1993. The cost of the service to the Eastern Health Board in 1995 was £569,000.

The report of the second commission on the status of women pointed out that many women were not aware of the free maternity and infant scheme. According to the discussion document "Developing a Policy for Women's Health", closer links between general practitioners and maternity hospitals would reduce unneccessary visits to hospitals and time consuming journeys for many women, as well as ensuring more time available for women who require the specialist care of a maternity unit and promoting the integration of health services rather than continuing to distinguish services by function.

STUDY

A study was established to compare the uptake of the mother and infant scheme before and after eligibililty was extended to all women. Further aims were to examine the possibility of conducting a consumer/user survey to identify patient/doctor satisfaction with the scheme and, if uptake was found to be low, to determine the reasons for non-utilisation of the scheme.

Information on uptake of the scheme was readily available for community care areas 1, 2, 3, 4, 5, 9 and 10. Figures for four years between 1990 and 1994 inclusive were available. There are no figures available for 1991. The four years were selected because the number of births for each community care area was available on the RICHS system. The method by which claim forms were filed per area was also sought, with a view to conducting a survey of users and non-users of the scheme in areas of low and high uptake.

The table shows the overall and per area uptake of the scheme.

Table 1 **Percentage Uptake of Mother and Child Scheme by Community Care Area (CCA) in 1990, 1992, 1993 and 1994**

CCA	1990	1992	1993	1994
1	24%	23%	23%	37%
2	12%	11.5%	18%	14%
3	17%	11%	14%	18.5%
4	36%	30%	35.5%	34.5%
5	35.5%	43%	49%	51%
9	21%	26%	21%	23%
10	74%	63%	77%	66%

NOTES: Percentages are percentages of total claims/adjusted births
Total number of births for the 4 years was 50,000
Total number of claims for the 4 years was 16,000
The average percentage uptake of the scheme was 32%

The uptake of the scheme is surprisingly low at 32%. The uptake per community care area varies from 13% in CCA 2 to 70% in CCA 10. There has been no significant increase in total uptake, and very little change in uptake within each area, since eligibility was extended in 1993.

RECOMMENDATIONS/MEASURES

A survey to compare the views of patients and doctors who use the scheme during a particular year with the views of those who do not should be undertaken. The purpose would be to enquire concerning:

(i) Patient satisfaction/dissatisfaction
(ii) Doctor satisfaction/dissatisfaction
(iii) Reasons mothers and doctors do not avail or only partly avail of the scheme.

This would give a clearer picture of the utilisation of the scheme and would facilitate modifications and wider promotion leading to an increase in uptake.

CHAPTER 4

BIRTH NOTIFICATIONS

INTRODUCTION

"Shaping a Healthier Future" states that services delivered in the postnatal period and in the first year of life are a critical component of infant care and child health. The review group on maternity and infant care have recommended that every baby should receive a first visit from a public health nurse as soon as possible after discharge from the maternity hospital/unit, ideally during the first 24 hours. The system of birth notifications is the starting point for the involvement of community care and many services, particularly those of the public health nurses, flow from it.

CURRENT POSITION

Delays in the transfer of birth notification information currently prevent public health nurses from visiting babies during the first 24 hours after discharge. In the Eastern Health Board region, the three largest maternity hospitals notify births to headquarters in Dr. Steevens' Hospital as follows:-

Coombe Hospital: via computer link daily;

National Maternity Hospital: via photocopy of delivery ward record book posted daily;

Rotunda Hospital: photocopy of birth notifications to the registrar of births forwarded twice weekly by courier.

Mount Carmel Hospital & Clane Hospital: no information available

Wexford Hospital: outside the Eastern Health Board area.

In addition, in cases of births at home, private midwives are required to notify the local Director of Community Care/Medical Officer of Health within 36 hours.

Notifications of births to unmarried mothers are retained in Dr. Steevens' Hospital pending clearance for release by the social workers in the maternity hospitals. This procedure was put in place many years ago to protect patient confidentiality. Release of these notifications is as follows:

Coombe Hospital: the record is released following contact between social workers and staff in Dr. Steevens' Hospital;

National Maternity Hospital: weekly release of records following contact between staff in Dr. Steevens' Hospital and the senior social worker;

Rotunda Hospital: a cover note with the birth notification form states whether the child is remaining with the mother or being adopted/fostered.

Staff in Dr. Steevens' Hospital transfer birth notification information electronically to headquarters in Dublin community care areas. Kildare and Wicklow areas are notified directly by the maternity hospitals. The methods of dispersal from each headquarters to the public health nurses in health centres are:

(i) by post, taking from 1 to 5 days;
(ii) by hand, taking from 1 to 9 days, or more recently
(iii) by telephone, taking 1 day.

Public health nurses visit mothers and babies within 24-48 hours of the receipt of birth notifications.

STUDY

A two day pilot study was carried out to determine the lengths of time between births in the maternity hospitals and the receipt of the birth notifications by public health nurses. A more detailed one-month study is planned for May 1996.

The system of birth notifications was found to be slow, inefficient and unpredictable, and the study confirms that the current system does not allow public health nurses to visit mothers and infants within 24 hours of discharge from maternity hospitals. Problems identified include the following:

(1) Manual transfer of birth notifications results in delays. The computer in the Coombe Hospital which interfaces with that in Headquarters in Dr. Steevens' Hospital is a more efficient system;

(2) There were delays caused by the methods of transfer of information within community care areas to public health nurses, regardless of the method of transfer used;

(3) There were long delays in the release of records for unmarried mothers;

(4) There were also long delays in notifications of births of children born in hospitals outside the Eastern Health Board area to mothers living within the board's area.

(5) In addition, public health nurses had little or no contact with mothers in the antenatal period, and many were unaware that they were even attending antenatal classes - in most cases, a nurse first became aware of the existence of a baby when the birth notification arrived.

RECOMMENDATIONS/MEASURES

1. All mothers attending maternity hospitals, G.P's or private midwives antenatally should be advised to contact their public health nurse. A process should be put in place to enable the referring agency, with consent, to forward a mother's name, address and telephone number to community care headquarters for onward transmission to the nurse.

2. Public health nurses should have an input at antenatal classes. Information on their service should be displayed on noticeboards at antenatal clinics and classes, and information packs detailing contact telephone numbers should be given to mothers at the first antenatal visit and on discharge from hospital.

3. Since computers are the most efficient means of transfer of information, we recommend that the computer systems of maternity hospitals be made compatible with those of the Eastern Health Board.

4. Births should be notified daily via computer link between all three maternity hospitals and Dr. Steevens' Hospital.

5. Modern technology, such as computer terminals and fax machines, should be installed in health centres to facilitate the efficient transmission of information to public health nurses.

6. Records of births to unmarried mothers should be released in the same manner as other birth notifications unless the maternity hospitals specifically request that particular records be retained.

7. Information transmission procedures within all community care areas of the Eastern Health Board should be streamlined.

CHAPTER 5

PUBLIC HEALTH NURSING SERVICE

INTRODUCTION

Public health nurses have a vital role in the maintenance and promotion of the health and social gain of children. They, of course, undertake many other duties as well. They have unparalleled access to all families and their monitoring of children's development, health and welfare is crucial. They meet with all mothers and are in a unique position to advise, support and educate. Information is given by the public health nurse which enables families to make informed decisions regarding the health of their children.

CURRENT POSITION

Home visiting is the priority within the child health service. Clinic attendances do not substitute for home visits. The standard visiting schedule is five visits by the public health nurse to the mother and baby during the first year of life, two in the second year and one in the third year. There is no standard appointment procedure and public health nurses usually visit without any advance notice to mothers.

STUDIES

(1) QUESTIONNAIRE TO SUPERINTENDENTS

In the Eastern Health Board's report "Review of adequacy of child care and family support services 1994", it was stated that ineffective calls accounted for between 23% and 38% of all calls made by public health nurses. A questionnaire was distributed to the superintendent public health nurse in each of the ten community care areas (see appendix 1 for copy of questionnaire). The questions related to five main areas:

(i) the delivery of information on the public health nursing service to parents in maternity hospitals;
(ii) concentration of home visiting in the first three months of a baby's life;
(iii) flexibility in the working hours of public health nurses;
(iv) the introduction of an apppointment system for child health home visiting;
(v) extension of the child health service to include clinics on Saturdays.

The questionnaire was designed to allow comments and suggestions. All questionnaires were returned. Superintendents reported that the most urgent problem was the number of "failed contact"/ineffective home visits - where a nurse calls to a house and finds no one at home. Many young mothers are less housebound than in the past and, as a consequence, the number of "failed contact" visits is quite large.

The recommendations below are based on the replies received from the ten superintendents. Some of the recommendations overlap with those from a survey of consumer satisfaction with the public health nursing service which was undertaken by the Institute of Community Health Nursing in 1995.

(2) APPOINTMENT SYSTEM

A pilot scheme to reduce the numbers of ineffective calls is operating in four selected areas of community care area 8 where ineffective calls were a problem. The pilot scheme is run under the direction of Ms. Sheila Armstrong, superintendent public health nurse, and is being monitored by senior public health nurses. It commenced in April 1995 and is scheduled to run for one year. Final evaluation will take place in May 1996. The scheme consists of two different systems of making appointments based on whether or not a family has a telephone. 70% of families have telephones; the remaining 30% do not. Where a family has a telephone, the public health nurse agrees a day and approximate time of the visit approximately one week in advance. Where the visit is the first notification visit, the nurse telephones the parent on the day she receives the notification and agrees the time of the visit on that day or the following day. Where a family has no telephone, the visit is made without an appointment. Where no contact is made, a card is left requesting the parent or guardian and child to attend the nurses' clinic that week. The card states the date and time of the apppointment at the clinic, and also states the date and time at which the public health nurse will visit the home in the event that the mother is unable to attend the clinic. If there is repeated failure to make contact, and non-attendance at the clinic, a letter is sent to the parents or guardians requesting them to contact the service.

Table 2 **Comparison of total numbers of calls and ineffective calls to homes by public health nurses for six months' period before appointment system and six months' period of appointment system**

	April to September 1994		April to September 1995	
Area	**Total Calls**	**Ineffective Calls**	**Total Calls**	**Ineffective Calls**
Coolock	2085	921 (44%)	1633	74 (4.5%)
Edenmore	1493	546 (36.5%)	990	228 (23%)
Kilbarrack	1089	523 (48%)	881	18 (2%)
Swords	2516	1006 (40%)	2898	148 (5%)
Totals	7183	2996 (41.7%)	6402	468 (7.3%)

The appointment system significantly reduced the numbers of ineffective calls and there were fewer total calls - the numbers of children requiring home visits did not change significantly between the two study periods. The total number of ineffective calls declined from 41.7% in 1994 to just 7.3% in 1995, and there was a reduction of 11% in total numbers of calls. A full evaluation of the outcome will be required at the completion of the study. However, if the full year evaluation confirms these findings, an appointment system would increase efficiency and significantly reduce time wasted on ineffective visits.

(3) WORKING HOURS

In community care area 8, a flexible working week for public health nurses, based on a working day 8.30 a.m. to 6 p.m., has been introduced in association with the appointment system. This has increased the flexibility of nurses to offer home visit appointments at times suitable for more parents.

RECOMMENDATIONS/MEASURES

1. Public health nurses should have an input at antenatal classes in maternity hospitals. At the first antenatal visit, an information pack on the relevant community services should be given to the mother. Information on the public health nursing service should be displayed at antenatal clinics and classes. An information leaflet should be given to the mother on discharge from hospital and this should include health centre telephone numbers.

2. Home visits should be concentrated in the first three months of a baby's life to facilitate rapport between nurse and mother, and to enable nurses to provide better support for first time and breast feeding mothers. The frequency of visits should be based on an assessment of need by the nurse.

3. To facilitate working mothers and to encourage greater participation by fathers in the care of their children, public health nurses should have a flexibility in their working hours within an agreed time frame. Community care area 8 is piloting a flexible working week based on a working day of 8.30 a.m. to 6 p.m.. and this has increased the effectiveness of home visiting.

4. An appointment system for child health home visiting was identified by superintendent PHNs as being very worthwhile in addressing the problem of ineffective calls. A protocol for this system should be agreed following assessment of the pilot which is currently in operation in CCA 8.

5. The extension of the child health service to include clinics on Saturdays is not recommended. The Institute of Community Health Nursing's national pilot study "Consumer Participation in the Child Health Services" (1995), proposed Friday evening and Saturday morning as possible additional clinic times, but there was insufficient demand from parents to justify the additional cost.

CHAPTER 6

DEVELOPMENTAL EXAMINATION

INTRODUCTION

The recommendations of the 1967 review of child health services are the basis of the community child health services in Ireland today. The statutory requirements under section 66 of the Health Act 1970 direct health boards to make available, without charge, a health examination and treatment service for children under 6 years of age.

The aim of the nine month developmental examination is to detect early those children who have developmental delay or other health-related problems. There are many disorders where early detection and treatment improves outcome. In others, early diagnosis does not neccessarily reduce the severity of the disability, but appropriate intervention enables the child and family to cope with disability more effectively, by reducing parental frustration and isolation and by helping the child to maximise those functions and abilities which are preserved. The success of such a preventative programme requires the highest possible uptake.

CURRENT POSITION

In the Eastern Health Board region, a developmental paediatric examination is offered to all children at approximately nine months old regardless of their area of residence. The examination includes a developmental history, observation of the child's behaviour and the administration of various tests in order to establish the stage of development of the child and to identify deviation from normal. All children are examined with the aim of identifying those with significant, but overlooked, physical and developmental problems.

Uptake of first appointments varies between community care areas (57% to 90%; average 75%). Uptake of repeat appointments by those who default from first appointments also varies. Accessibility to clinics is not a problem in areas of low uptake. External pressures which have impacted on the service over the past decade include resource allocation and opportunity costs. For example, the 1995 measles/rubella campaign led to the suspension or reduction of developmental clinics in some community care areas.

STUDIES

A study by Dr. Anne Keane investigated why mothers did not bring their children for developmental examination, the level of their knowledge and their attitudes to the examination, and whether they would prefer the examination carried out by their general practitioner. A case-control design was used.

It was found that a higher proportion of non-attending mothers had no means of transport, lived far away from clinics and had to care for other children. Non-attending mothers were more likely to have low education and no third-level education than those who attended. Taking time off work was another problem. There was no significant difference between attenders and non-attenders in terms of knowledge of the purpose of the examination or belief in preventative measures. Two-thirds of both groups indicated that they would prefer a clinic doctor (i.e. area medical officer) to perform the examination. One-third would have preferred to attend their general practitioner.

Dr. Keane recommended facilitating working mothers, improving mothers' knowledge of the purpose of the examination and improving the appointment system, including reallocating cancelled appointments, as part of increasing resource efficiency.

Quality as viewed by the consumer is one of the principles of the Health Strategy. In keeping with this and by way of expansion of the study above, the committee established a survey to obtain the consumer view of the developmental examination. This was undertaken by means of a postal questionnaire to 400 parents/guardians whose children had recently attended for a nine-month developmental examination in the Eastern Health Board. A response rate of 39% was obtained to a once-off mailshot. The study is presented in more detail in Appendix 2. Findings indicate a high level of quality in terms of consumer satisfaction factors, except in the case of physical surroundings - 90.4% had their expectations met, 91.7% found the examination reassuring, and over 97% would use the service again. Improvements in all aspects of physical environments would lead to an improvement in quality of service as perceived by the consumer.

The 1994 Review Report drew attention to the number of children receiving further attention after developmental examinations and to differences in the numbers referred from different community care areas. A study was undertaken to identify why such differences existed. Each area medical officer involved in developmental examinations was asked to complete a postal questionnaire concerning the structure and process of the examination. The study aimed to establish whether there were differences in practices between area medical officers and between the ten community care areas. The findings are presented in appendix 3 and are based on a response rate of 77%.

While guidelines are not used by most area medical officers for making decisions on referrals, and many prefer to rely on experience, the lack of guidelines only accounts for some of the differences in numbers of referrals between community care areas. Special clinics, separate from nine-month developmental clinics, for examination of other children with developmental and medical problems, are run in many community care areas. No computer forms are provided for these clinics although in some areas a form is completed by hand and given to the senior area medical officer. These forms are then retained in the community care areas and details of children attending these special clinics are not entered in the RICHS system. Consequently, much of the work of area medical officers goes unrecorded.

The Eastern Health Board uses the services of other agencies, including those to which children requiring further attention after developmental examinations are referred. The three major paediatric hospitals were contacted by the committee, requesting information on the outcome of referrals from developmental clinics. However, due to resource and time limitations, the offer to facilitate access to relevant information could not be pursued at this stage.

FUTURE

Changes in health and health services will change the purpose of the nine-month developmental examination. Measures of the effectiveness of the examination must include not only objective outcome measures but also subjective measures, including the views of consumers, the role of the examination in the new morbidities, social changes and health promotion.

RECOMMENDATIONS/MEASURES

1. The nine-month developmental examination is very reassuring for parents and should be maintained in its present form.

2. Each community care area should nominate one area medical officer to follow-up defaulters from clinic services.

3. Health centres in which examinations take place need attention to decoration, furniture, facilities for mothers and babies, storage areas for buggies, and changing facilities.

4. Hospitals to which children are referred following developmental examinations should be required to send feedback letters, detailing findings, investigations and treatments, to referring area medical officers.

5. The specialist in child health in the Department of Public Health should, in consultation with appropriate specialists, develop guidelines and criteria for follow-up and referrals of children attending developmental examinations.

6. Computer forms, similar to those issued for the nine-month developmental examinations, should also be issued for special clinics, and details of children attending these clinics should be entered in the RICHS system.

7. The offer by the three major paediatric hospitals to facilitate access to records of children referred by area medical officers should be followed up, and a study established to examine how these records can be made accessible to referring doctors in the future.

CHAPTER 7

SCHOOL HEALTH SERVICE

INTRODUCTION

The school health service was introduced in the early part of this century in response to concerns about the poor state of health of men recruited to fight in the Boer War. It has continued with various modifications since then.

In common with the pre-school health service, the school health service was last reviewed in 1967. The recommendations of the 1967 review group form the basis of the service as it exists today. The statutory requirements under section 66 of the Health Act 1970 direct the Health Board to make available without charge a health examination and treatment service for pupils attending national schools. The 1967 review group recommended a medical examination at 6 years of age, selective examination of nine year old children, routine annual screening by the district nurse and selective further examinations.

CURRENT POSITION

Over the years, there has been wide variation and change in the implementation of the policy recommended by the review group and incorporated in the Health Act 1970, partly taking account of the historical context in which the service was developed and in part because of changing demands, needs and resources. The service is primarily one of screening and, apart from the immunisation programme, health promotion and disease prevention do not feature very strongly.

The health of school-age children today is significantly better than their counterparts in the late 1960's, and family doctor, hospital and other paediatric services are better developed and more widely utilised. A full medical examination of each national school child is no longer appropriate and, in response to this changing requirement, school health examinations have become increasingly selective (see appendix 4 for area reports). Screening of vision and hearing now occupies most of the time at school medical examinations - public health nurses carry out an average of 40,000 vision tests and 35,000 hearing tests annually on national school children in the Eastern Health Board area.

The estimated number of children tested per annum by the ophthalmology services in the general hospitals is 10,500. This figure is based on the issue of spectacles. Using a basis of £15 per vision test, similar to that for adults, the total cost of the ophthalmology service for national school-age children is in the region of £160,000. The annual total cost to the Eastern Health Board for the supply of all spectacles is £322,000.

Audiology clinic appointments total 2,500 per annum in the Eastern Health Board. The normal average requirement is three visits per patient and it is estimated that approximately 840 patients are seen per year. The annual cost to the Eastern Health Board of the audiology section of the National Rehabilitation Board is £112,000, including £25,000 for hearing aids and their maintenance. There is an additional cost of £16,000 for overheads on premises and the maintenance of clinics.

The World Health Organisation has stated that changing patterns of childhood morbidity in industrialised societies demand a new and dynamic response from school health services. In Ireland today, new areas of concern to parents and teachers, which are not likely to be under treatment, are problems of a social and behavioural nature.

STUDY

A questionnaire was sent to all area medical officers in the Eastern Health Board. The questionnaire enquired into every aspect of the school health service and was designed to record current practices and to highlight differences, if any, between the practices in different community care areas. Based on the findings, the study group aimed to identify discrepancies in practices and outdated examinations, and to make recommendations to eliminate time-consuming and wasteful procedures. The study group is aware that the Department of Health is currently involved in a full review of the school health service and makes its findings and recommendations by way of contribution to this review.

FINDINGS

85% of area medical officers returned completed questionnaires. Replies were confidential.

The study found that there were wide variations in practices throughout the community care areas (see appendix 5 for detailed findings). Medical inspections of the structure and hygiene of schools and screening of schoolchildren were mainly carried out by public health nurses. Booster immunisations were available in the majority of schools and were administered by specific vaccinating doctors and area medical officers. There was no general agreement on what was meant by health education/promotion or on the programmes presented. They were organised on a haphazard basis and delivered by various members of medical and nursing staffs.

At least one class was screened yearly in the majority of schools. The remaining schools were screened every two or, in a few cases, three years. Schools were not given equal priority in all community care areas - where prioritisation was applied, schools in disadvantaged areas were targetted. The most frequently targetted classes were junior and senior infants and first class and, at older ages, fifth and sixth classes. Apart from universal screening of hearing and vision, and some screening of scoliosis and colour vision, very little other screening was undertaken unless specifically requested by a parent.

There was no standard consent form/questionnaire for use in all areas. Each community care area has developed its own form. All forms include questions about name, address, family details, birth history, past medical history, and hearing and vision. Thereafter, forms highlight different aspects of medical details.

Vision is screened by public health nurses. Poor environmental lighting and inadequate room dimensions are two problems frequently encountered. A variety of tests is used - Snellen (more commonly modified and unlighted), Stycar and Keystone. Ischihara test plates are used in some areas to test colour vision. Nurses refer all abnormal and doubtful vision tests to area medical officers, who retest and/or refer the children to ophthalmology clinics. Minimum criteria for referring a child to an eye specialist vary. The most popular criterion was 6/12 vision unilaterally or bilaterally irrespective of the test used. In some areas, eye specialists have advised medical officers to refer all children with 6/9 vision unilaterally or bilaterally. On average, each area medical officer makes 120 referrals per year to ophthalmology clinics. They receive virtually no feedback or follow-up letters from clinics, a situation which makes audit of referral criteria impossible.

Hearing screening is undertaken by public health nurses trained in the procedure. All children are tested whether parents report hearing as normal or not. In the majority of cases, abnormal tests are rechecked and, if an abnormality is confirmed, printed audiograms are attached to school cards and the cards sent to area medical officers for review. However, rechecking of abnormal audiograms is not universal and in one area it was found that some abnormal audiograms were stored and no further action was taken. In some areas, children are referred only to their family doctors for follow-up. Minimum criteria for referral to ear, nose and throat specialists varied widely from a 10 dB loss at one frequency in one ear, a very common finding, to 10 dB losses at any number of frequencies in either or both ears. Again, there was virtually no feedback from hospital clinics concerning children referred. Some areas referred children with abnormal audiograms to audiologists for confirmatory hearing tests under ideal conditions before making referrals into the hospital service.

Screening of ten to twelve year old girls for scoliosis is still officially undertaken in two community care areas. In community care areas where screening for scoliosis has been officially discontinued, it was found that some public health nurses continue the practice. In general, girls with abnormal findings are referred to outpatients' clinics where they are followed up over a number of years. Apart from an initial letter acknowledging the referral, there is no further feedback and no one knows what happens to referred children or whether they benefit in the long term. Studies in recent years suggest that the current screening method for scoliosis is unreliable and should be discontinued in the absence of audit.

Referrals for educational psychological problems are dealt with in many different ways, and referrals are made by handwritten letter or by dedicated form depending on the requirements laid down by the services to which the children are directed. Similarly, for social and behavioural problems, some community care areas have well-established referral systems, while others do not.

The report of the Strategy Task Force on Child Health recommended the introduction of a single child health record card incorporating both the nine-month developmental examination and the school health examination details. Until this becomes available, parent memory, physical linkage of cards, or the more time consuming computer checking of developmental examinations are the only ways to link information from the preschool and school health services. In order to assess the nature of the problem, parents of children entering schools in community care area 10 in the school year 1994/95 were asked to indicate whether their children had previously had a nine-month developmental examination. 15% of parents had no recall of such an examination. In the absence of computerised records, it was not possible to check the truth of parents' reports. There is an argument that children who have never had a developmental examination should, if their parents consent, be given the benefit of a comprehensive examination at school.

VISION SCREENING

In recent years, hospital-based ophthalmologists have complained that area medical officers are referring large numbers of children with normal 6/6 vision, thereby lengthening waiting lists and upsetting parents unneccessarily. In 1992 and 1993, an evaluation of the effectiveness of vision screening in primary schools was undertaken by Dr. Geraldine Brophy in one community care area because a new test method, the Keystone test, was producing many false positive results. The advantage of the Keystone box is that it does not require 6 metres of floor space as with Snellen and Stycar tests and can be used in schools where space is limited. The study found that minor modifications in criteria for referral substantially reduced the number of false positives and improved the efficiency of the screening programme. Subsequently, these modified criteria were adopted in some community care areas, but not in all.

In community care area 8, a small study was undertaken to compare the findings of Keystone tests and lighted Snellen charts in seven and eleven year old children. The lighted Snellen chart is now the internationally accepted gold standard for testing vision. 65 children, who were found to have abnormal vision (6/15 unilaterally or bilaterally, or worse) on Keystone testing, were rechecked using the lighted Snellen chart. 71% of them were found to have normal 6/6 or 6/9 vision using the second test! Children confirmed that they had difficulty with the size of the aperture in the Keystone box and that this impaired their ability to read the test letters. The pressure on public health nurses to test large numbers of children in a short period meant that inadequate time was given to permit reading of letters in the box.

Finally, the Stycar test is no longer recommended for general use in school vision screening, although it is still in use in some community care areas.

HEARING SCREENING

In community care area 8, 26 children whose parents reported normal hearing and whose audiograms were abnormal (minimal hearing loss of 10 dB at three frequencies in one ear or at one frequency in one ear and two frequencies in the other ear) were

retested by an audiologist under ideal conditions. All 26 children were found to have normal hearing, confirming that parents are reliable assessors of childrens' hearing. The results of this pilot study indicate the urgent need for a further more in-depth study.

The National Rehabilitation Board provides an audiology service for some children referred from school medical examinations. Using a study which was undertaken in the south-east of the country, the Board was able to extract the following information for community care areas 9 and 10. Results of referrals from Dublin were not available. The results are a combination of the figures for the years 1989 to 1993.

Table 3 Details of referrals to the National Rehabilitation Board for assessment of abnormal hearing - Community Care Areas 9 and 10; 1989 to 1993

	CCA 9	CCA 10
NUMBER REFERRED	925	624
SOURCE OF REFERRAL		
Area Medical Officer	76%	76%
General Practitioner	7%	10%
Speech Therapist	6%	8%
ENT Consultant	6%	3%
Others	5%	3%
GENDER		
Male	55%	58%
Female	45%	42%
OUTCOME OF ASSESSMENT		
Normal	37%	30%
Transient Conductive Hearing Loss	26%	27%
Persistent Conductive Hearing Loss	31%	35%
Unilateral Sensorineural Loss	3%	3%
Bilateral Sensorineural or Mixed Loss	4%	4%
Other	1%	1%

FUTURE

The school health service has made a valuable contribution to the health of children. However, the direction of the service has changed in recent years because of changing patterns of childhood morbidity, generally better health among children, wider availability and greater uptake of paediatric services, and earlier detection and more effective treatment of illnesses and abnormalities. Full physical examinations are no longer neccessary for all children. The current practice of screening for vision and hearing abnormalities by public health nurses will continue, but some modifications are required. Screening for other abnormalities is not cost-effective and should be phased out. The sub-group is conscious that the school health service is currently under review and we offer our recommendations for consideration by the National Review Group.

RECOMMENDATIONS/MEASURES

1. Section 66 of the Health Act 1970, requiring the Health Board to make available, without charge, a health examination and treatment service for all pupils in national schools, should be modified to take account of changing practice in the light of better health among children generally.

2. The booster immunisation service should be extended to all schools.

3. The specialist responsible for the child health services in the Department of Public Health should standardise consent forms, screening examinations and systems of referral and feedback throughout the Eastern Health Board. An advisory group comprising one senior area or area medical officer and one superintendent or public health nurse in each community care area should be appointed to advise and assist the specialist in this task.

4. The consent form, which parents receive before the first school examination, should be modified and standardised throughout the Board's area. The form should be sent to parents of all children to be screened. Emphasis should be placed on questions about vision and hearing, and there should be a short third section on the form for other health concerns.

5. Public health nurses should undertake all screening of vision and hearing.

6. The child health services specialist, following consultation with consultant colleagues, should prepare criteria for referral to area medical officers and distribute these to all public health nurses involved in school screening. These should be reviewed and modified annually in the light of medical developments and changing needs.

7. School screening should be carried out in first and fifth classes only, except where a specific request is made.

8. Apart from screening of vision and hearing, other screening tests should be discontinued in all areas.

9. A lighted Snellen box should be used for all vision screening. Stycar tests and Keystone boxes should be abandoned.

10. The problem of inadequate room space in small schools preventing the use of the lighted Snellen box can be solved by using diagonal room dimensions (i.e. from one corner diagonally across a room to the other) instead of the width and breadth dimensions.

11. In vision screening, criteria for referral should be standardised. The sub-group suggests that 6/12 vision or worse should be the minimum criteria for referral irrespective of demands from outside agencies.

12. Children who are thought to have strabismus and who have normal 6/6 or 6/9 vision in both eyes should not be referred to eye clinics.

13. The Eastern Health Board should require all agencies and hospitals to which children with abnormal vision are referred to send reports on their findings and treatment to area medical officers.

14. If a parent notes on the consent form that a child has normal hearing and has not had any hearing problems in the past, it is open to question whether the child requires screening. This issue can only be clarified by an in-depth study as discussed above.

15. Minimum criteria for an abnormal audiogram requiring referral should be as currently recommended by hearing specialists and audiologists - a 10 dB loss at three frequencies in one ear or at one frequency in one ear and at two frequencies in the other ear.

16. Where an abnormal audiogram is found at the school screening test, the audiogram should be repeated for confirmation. A second abnormal audiogram should then be referred to an area medical officer, who should then request a further test by an audiologist under ideal conditions before referring to an ear, nose and throat specialist. In such circumstances, referral solely to a general practitioner is rarely appropriate.

17. All agencies and hospitals receiving referrals of children for assessment of abnormal hearing and audiograms should be required by the Eastern Health Board to send written reports of their findings and treatment to area medical officers making the referrals. Audit of referrals is impossible unless this recommendation is implemented.

18. Area medical officers and public health nurses should not be involved in referrals of children for educational psychological assessments. This is a purely educational matter which is within the remit of the remedial teaching service.

19. The specialist in child health services should clarify with the relevant agencies the pathways by which referrals of schoolchildren with social and behavioural problems should be made.

20. The specialist in child health services, in conjunction with superintendent public health nurses, should run one-day courses for public health nurses involved in school screening tests. The purpose of these courses would be to update nurses on screening and referral procedures.

21. Area medical officers should be required to produce a monthly audit of national school children referred to other health services, to include outcomes and reasons for referrals. Audits should be submitted to the senior area medical officer and the specialist in child health services and a monthly report produced and circulated to all area medical officers.

CHAPTER 8

SPEECH AND LANGUAGE THERAPY SERVICE

INTRODUCTION

The speech and language therapy service was hospital-based in the 1970s. In 1982, following publication of the first report on the service in Ireland (Speech therapists in the service of the community. Irish Association of Speech Therapists; Dublin, 1979), the service was assigned to the community care programme. Developments within community care were haphazard and waiting lists began to grow. In the early 1990s, the Eastern Health Board established a working group to examine the service in the Board's area. The group's report was published as "The Way Forward" in October 1994 and recommended "a planned annual increase in therapist numbers over eight to ten years".

In 1989, Enderby and Davies in their study of the service in the U.K., recommended 26.2 wholetime therapists per 100,000 population. Using this recommendation and based on the 1991 census population of 1.24 million in Dublin, Kildare and Wicklow, the Eastern Health Board should employ 267 wholetime therapists, including those therapists provided by hospitals and other organisations.

CURRENT POSITION

The speech and language therapy service in the community care programme treats pre-school and school-going children, as well as adults. The annual cost of the service is £1.23 million.

Involvement in the service begins with referral and ends with discharge. The process includes referral, assessment, diagnosis, intervention, re-assessment and discharge. Sources of referral vary between community care areas. Children are referred to area medical officers primarily by public health nurses and parents. Following assessment, AMOs then refer children to the speech and language therapy service. Referrals from G.P.'s and teachers account for a small number of clients. In some areas, only medical referrals are accepted by therapists.

When a child is referred for speech and language therapy, an additional request may or may not be made for an audiological assessment and this usually takes place before the child is seen by the speech and language therapist. However, the request is not automatic and is entirely at the discretion of the referring agent. In addition, where a therapist feels that an audiological assessment would be appropriate, s/he must refer the child back to the area medical officer to arrange the test.

STUDY

A survey was conducted among principal speech and language therapists to evaluate developments in the service since publication in 1994 of "The Way Forward" (findings are discussed below). The questions were designed to permit comparisons between the findings of the 1994 working group and those of this survey.

Nine of the ten principal speech and language therapists replied. The findings cover counties Dublin and Wicklow, and exclude Co. Kildare.

There are 63 speech and language therapists employed by the Eastern Health Board. 48 speech and language therapists, including two who are job-sharing, are employed in the nine community care areas of the survey. Two posts are unfilled. 41 of the appointments are permanent, and three are temporary. Four community care areas reported increases in numbers of therapists since publication of "The Way Forward". Five areas have not had any increase in therapist numbers despite the proposal of the working group for "a planned annual increase over eight to ten years".

In general, specialist posts in the areas of specific speech and language impairment, learning disabilities, mental handicap, and child psychiatry have not been established despite the recommendations in "The Way Forward".

In the past lack of secretarial staff and computerisation were identified as important problems impairing the efficiency of the speech and language therapy service. Five community care areas now have a dedicated clerical staff, all on a part-time basis. Four areas still have no dedicated clerical staff, and therapists must write all reports, letters, etc. by hand. No part of the service is computerised.

Table 4 shows that referrals to the service increased by an average 15% per year from 1992 to 1994. During the same time period, there was a 77% increase in the number of children who completed treatment and were discharged. Referrals and discharges have increased when compared with statistics quoted for earlier years in "The Way Forward". However, the number of therapists employed in the community care programme has also increased during the three years 1992 to 1994.

In 1994, all areas had waiting lists for initial assessment and for treatment. Seven areas prioritised the waiting list and one area had some prioritisation. Criteria of prioritisation included the type and severity of the disorder, age of the client, parental/client anxiety, remediation (language classes) available elsewhere, length of time waiting and family circumstances. Waiting times for initial assessments averaged nine months for general referrals and four months for priority referrals. The average time from initial assessment and diagnosis to the commencement of a programme was six months for general patients and two months for priority patients.

Six of the community care areas use standardised criteria for referral to the service; three do not. All areas use standardised procedures for admissions to waiting lists, but these procedures, while uniform in individual community care areas, are not uniform throughout the Eastern Health Board area. Eight areas used standardised assessments of children referred; one area does not.

Table 4 **Total and average numbers of referrals to speech and language therapy service from 1992 to 1994.**

	1992	1993	1994
Total number of new referrals in Eastern Health Board	2559	3025	3427
Average number of new referrals per C.C.A.	284	336	381
Total number of discharges in Eastern Health Board	1498	2448	2646
Average number of discharges per C.C.A.	166	272	294

Despite the recommendation in "The Way Forward" that audiological assessment should be provided on a priority basis for referrals from speech and language therapy, arrangements have only been put in place in one community care area. Similarly, only one community care area has a specific level of psychologists' time available to therapists.

Regular meetings between principal speech and language therapists and their counterparts in appropriate hospitals have occurred in some areas only. In the Department of Health strategy document "Shaping a Healthier Future", links with voluntary organisations and the development of joint plans were identified as an important future development. Links have been established in five community care areas, but only one area has produced a joint plan.

"The Way Forward" recommended that the principal speech and language therapists together with management should develop a uniform approach as regards:

(1) objective criteria and standardised assessments
(2) standardised procedures for admissions to waiting lists
(3) objective monitoring of client progress

(4) objective criteria for termination of therapy, and

(5) optimum patterns of therapy.

The study indicates that this has not happened either in the Eastern Health Board as a whole or in individual community care areas. One area does provide area medical officers with written guidelines for referral of new patients.

FUTURE

The three principles underpinning the "Shaping a healthier future" strategy document are equity, quality of service and accountability. There is no doubt that speech and language therapy offers a high quality of service and that speech and language therapists have increased the throughput of patients in response to the greater demands on the service. But equity and accountability cannot be addressed unless audit of the service is possible. Audit presupposes objective criteria for referral, assessment, treatment and discharge of children. In the survey above, principal speech and language therapists report that such criteria are not available despite recommendations in "The Way Forward". The development of objective criteria is fundamental to the future development of the service. Without these, improvements in staff numbers, the establishment of specialist posts, computerisation, secretarial support, etc., will not occur on a rational and planned basis.

RECOMMENDATIONS/MEASURES

1. Principal speech and language therapists should develop objective criteria for referral of new patients to the service. These criteria should be in the form of written guidelines and circulated to the referring agents and, in particular, to public health nurses and area medical officers. The guidelines should be uniform throughout the Eastern Health Board area.

2. Principal speech and language therapists should urgently develop standardised assessments and procedures for admissions to waiting lists. It should be possible to devise and put in place a screening process to rapidly assess children for allocation to priority or general therapy programmes.

3. Optimum patterns of speech and language therapy should be established to permit objective monitoring of client progress. Criteria for termination of therapy are also required.

4. There should be a recognised link between speech and language therapists and audiologists. The responsibility for arranging audiological tests should not lie with the referring agents, as is the case at present. When a request for speech and language therapy is received, the child should be referred automatically for an audiological assessment, and this should be provided on a priority basis before the child is first assessed by the speech and language therapist.

5. Secretarial staff should be provided on a part or whole-time basis in all community care areas.

6. There must be a rational approach to resource allocation and manpower planning based on the establishment of standardised procedures for referral, admission to waiting lists, prioritisation, assessment, treatment and discharge. A uniform approach throughout the Eastern Health Board area will permit comparisons between community care areas and will provide the basis for an annual audit of the service.

CHAPTER 9

THE ACCIDENT-EMERGENCY DEPARTMENT - GENERAL PRACTITIONER INTERFACE

INTRODUCTION

By definition accident and emergency services are provided for treatment of accidents and emergencies only. General practitioner services provide primary medical care in the community. The type of care which an accident and emergency department must provide is episodic and not comprehensive. This is the opposite of general practitioner care, which has continuity, patient follow up and comprehensiveness as its core elements.

CURRENT POSITION

In the Dublin general hospital services, the use of accident and emergency departments as general practitioner services has been well documented. This, in turn, has impacted on services and resources both of hospitals and G.P.s. The majority of paediatric A/E services in the Eastern Health Board are provided by non-Board agencies. However, G.P. services for those eligible are provided by general practitioners on a contract basis. The total cost of these GMS services in the Eastern Health Board is £23.1 million per year. The part of the service provided for children under 16 years of age costs £6.4 million per year.

STUDY

The committee, by means of a pilot study in one major paediatric hospital in Dublin, investigated why parents brought children to the A/E department, their use and perception of G.P. services, the outcome of their attendance at the A/E department and the number who could have been treated as effectively by their G.P.

The methodology and results are presented in detail in appendix 6. The majority of attenders were under five years. 97% had a named family doctor. 41.4% had been unwell for over 48 hours. Only 55.2% had attempted to contact their family doctor

and almost half (48.4%) were self-referrals. 20.4% required further hospital follow-up and, in the opinions of the attending doctors, 57.8% should have been treated by their family doctors.

FUTURE

There should be a clear distinction in the minds of parents between the nature of the services provided by general practitioners and those provided by hospital accident and emergency departments. The tendency to think first of hospital must be discouraged, and family doctors must aim to provide comprehensive round-the-clock cover for children either themselves or through making it known which general practitioners in their local area are providing 24-hour cover.

RECOMMENDATIONS/MEASURES

1. This study should be extended:
   - (i) to include all major A/E departments;
   - (ii) to examine A/E services provided by GPs in the community;
   - (iii) to further explore parents' perceptions of both services.

2. In the interim, a broad-based public information/education campaign explaining the availability and appropriate usage of both services should be provided, coupled with ongoing evaluation of the effectiveness of the two services.

3. Further appropriate measures should be developed based on the results of extended studies as outlined above.

CHAPTER 10

THE CHALLENGE

Health is a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity. Until recently, the medical model has dominated the philosophy and practice of the health services. However, in recent years, health model philosophy, especially in the community care programme, has been increasingly incorporated into other models.

A central aspect of the Health Strategy was to reorient the health services towards health promotion. Effective child health services play an important role in improving the nation's health for the future. The prevention of disease, the early detection of problems affecting growth and development and the positive promotion of health must be key features of the child health services. An overall Health Strategy target is the development of health promotion programmes in school, community, work place and health service settings. Effective measures to achieve this should be developed.

Children should receive a clear benefit (or outcome) from contact with the health system. Measurement of health is difficult because it is a multidimensional and value-laden concept. Lack of end-points and long intervals between processes and outcomes add to the measurement problem. For outcomes to be assessable, the specific aim of a service/discipline must be known. As proxy indicators of outcomes for the child health service, the committee requested and received information from agencies to which children were referred. This area could not be explored in depth because of time and resource constraints, but it merits further study.

The World Health Organisation describes the new social morbidities of childhood which need to be addressed. They include poverty, behavioural disturbances, child neglect/abuse, drug use, suicide and lifestyle issues. To meet the challenges posed by these new morbidities, the Eastern Health Board, as the provider of future curative, rehabilitative and care services, should develop (proxy) indicators of the effectiveness of the programmes (and training) currently in place and proposed for the future.

The challenge for the future is to continue to implement the health model philosophy and to develop clear aims for each service, discipline and agency. Aims must be flexible and capable of alteration in response to changing needs and morbidities.

APPENDIX 1

PUBLIC HEALTH NURSING QUESTIONNAIRE
INEFFECTIVE CALLS

COMMUNITY CARE AREA: _____

1. Should information on the Public Health Nursing Service be given to parents in Maternity Hospitals? YES ___ NO ___

   If "YES", how should this be done?

   _____
   _____
   _____

2. Do you agree with the proposal that home visiting should be concentrated in the first three months after the Birth Notification is made? YES ___ NO ___

   Comments:

   _____
   _____
   _____

3. Do you feel that greater flexibility in the working hours of Public Health Nurses would facilitate more effectiveness in their home visiting? YES ___ NO ___

   Comments:

   _____
   _____
   _____

4. What is your opinion of an appointment system for Child Health Home Visiting?

Comments:

_____

_____

_____

5. Do you consider that the Child Health Service should be extended to include clinics on Saturdays? YES ___ NO ___

Comments:

_____

_____

_____

Further comments:

_____

_____

_____

_____

Signature: _____ Date: _____

APPENDIX 2

CONSUMER SURVEY
(Parent/Guardian - 9 month developmental examination)

INTRODUCTION

One of the three principles of the Health Strategy in "Shaping a Healthier Future" is technical and consumer quality. To assess the consumer view of quality, the committee obtained the views of parents/guardians of children who had attended for a nine month developmental examination.

METHOD

The parents/guardians of 400 children who had most recently attended for a nine month developmental examination anywhere in the Eastern Health Board were surveyed. Most recent attenders were chosen to maximise recall of events.

An anonymous pre-paid return postal questionnaire was used. The method of return was chosen to minimise the risk of parents/guardians answers being influenced by personal knowledge of health care staff. 400 parents/guardians were included to allow for an anticipated response rate of 25%, a rate which is consistent with other studies of similar type. A questionnaire was developed using appropriately-adapted aspects of previously employed questionnaires. Questions were asked about appointment notice, knowledge of the purpose of the examination, source of knowledge and expectations of the examination, satisfaction with the examination and the waiting area, and whether the parent/guardian would use the service again. A pilot study using a sample of twenty was conducted in urban and rural areas to examine issues of comprehension and clarity.

RESULTS

39% (156) of the questionnaires were returned in response to a once-off posting. SAS analysis was used to determine frequencies of variables.

96.2% (150) had received adequate notice of the appointment, and 85.3% were informed beforehand of the purpose of the examination. The top six sources of information were as listed in Table 5 (some parents gave two sources).

Table 5 Sources of information about the developmental examination

SOURCE	NUMBER	%
Public health nurse	95	71.4%
Other child had check	40	30.1%
Other mothers	22	16.5%
Leaflets	7	5.3%
General practitioner	3	2.3%
Media (radio/television)	1	0.8%

91% (142) knew in advance what a developmental examination was. 90.4% (141) had their expectations of the examination "more than met", while the expectations of 7.7% (12) were "not met". The expectations of the respondents are shown in the Table 6.

Table 6 Expectations of Respondents

	YES		NO	
	Number	%	Number	%
Medicine	2	1.4%	99	69.7%
Shorter examination	15	10.6%	84	59.2%
Longer examination	30	21.1%	69	48.6%
Other examination	11	7.7%	3	2.1%

91.7% (143) considered that the time spent with the public health nurse was adequate, while the figure for the area medical officer was 88.5% (138). 91.7% (143) were told the result of the examination, and the same number thought that the examination was worthwhile. 10.9% (7) thought that the examination was a waste of time. 97.4% (152) would take up the offer of a similar appointment if they had another child.

Less than two-thirds (64.1% or 100) were satisfied with the waiting area. The causes of dissatisfaction are listed in Table 7.

Table 7 Causes of dissatisfaction with waiting areas in health centres

No/too small play area	76.5%	39
No/too small buggy area	62.7%	32
Cramped/overcrowded	37.3%	19
Cold	29.4%	15
No/poor toilets	25.5%	15
Badly lit	9.8%	5
Noisy	5.9%	3

DISCUSSION

Studies in the literature indicate that an average consumer satisfaction rate of 85% should be expected. In this survey, the parents/guardians indicated rates of 90% or more for almost all the process variables. 97.4% would use the service again, confirming its quality in the eyes of the consumer. Areas which require improvement include communication and physical surroundings including waiting areas.

APPENDIX 3

NINE MONTH DEVELOPMENTAL EXAMINATION
AREA MEDICAL OFFICERS

INTRODUCTION

The 1967 review of child health services recommended that children in centres of population greater than 5,000 should be offered developmental examinations by doctors. In the Eastern Health Board, the current practice is to offer the examination to all children regardless of the area of residence. The aim is to examine all children in order to identify those who have significant health problems.

To assess the effectiveness of the service, to analyse information on output and to develop outcome measures, it is first neccessary to have baseline information on the actual process. The aim of this study was to obtain the information.

METHODOLOGY

A comprehensive questionnaire, incorporating details of the nine-month developmental examination, was developed, piloted and modified as neccessary. Precoded questionnaires were sent to all area medical officers in the Eastern Health Board who carried out the examinations. Each questionnaire was accompanied by a covering letter explaining the nature and purpose of the study and the confidential nature of the replies.

82 (77%) area medical officers replied to the questionnaire. Variables were analysed using SAS.

FINDINGS

All area medical officers screened hearing, vision, strabismus, heart, hips, testes, head circumference, weight, manipulation (picking up items), motor development (sitting, walking), speech/language and social behaviour. 86% screened femoral pulses, 76% checked reflexes (lateral righting, parachute) and 48% measured length/height.

Most doctors routinely enquired about birth, family, genetic, diet and immunisation histories. 32% discussed the use of sunblock and 22% discussed accident prevention. Less than 20% enquired routinely about mother-child bonding, unemployment, standard of housing and whether parents were married or single. 90% relied on the public health nurse to advise of problems in this latter area.

44% of medical officers referred all cardiac murmurs. 62% used guidelines/criteria by which to make a decision. All children with murmursassociated with palpable thrills, cardiomegaly, hepatomegaly or cardiac failure were referred. 70% referred children with murmurs associated with weights below the 3rd centile or recurrent lower respiratory tract infections.

Where a parent gave a history of recurrent wheeze in a child who was otherwise normal, 92% of area medical officers referred the child to a hospital consultant for review. 36% had guidelines/criteria by which referral decisions were made.

Area medical officers preferred to use the Ortolani test to diagnose dislocation of the hips. 90% followed-up children with delayed weight bearing. 78% referred boys with impalpable testes while the remainder arranged for follow-up in later clinics. 52% reviewed boys with retractile testes.

42% of area medical officers referred children where height was found to be under the 3rd centile; 22% referred where height was above the 90th centile; 20% referred children who showed change in centiles. 28% used guidelines/criteria by which to judge when to make referrals.

48% referred children with weight less than the 3rd centile; 36% made referrals where weight was found to be above the 90th centile. 14% referred where there was a change in centiles. 40% used guidelines/criteria by which to judge when to make a referral.

Where head circumference was under the 3rd centile, 58% of area medical officers referred. Very few referrals were made where head circumference was above the 90th centile, most preferring to use change in centiles as the criteria for referral.

In general, open posterior fontanelles were referred, while closed or large open anterior fontanelles were followed up.

90% of area medical officers screened hearing using a trained assistant. 78% stood behind the child, 12% stood above the child. All tested low and high frequency sounds, used the rattle and tested the response to naming. A failed hearing test was defined as no or a poor response to one test. In general, criteria for referral and follow-up were similar. A failed screen by the area medical officer was seen as the most important reason for follow-up and referral, followed in decreasing order of importance by maternal concern, family history of hearing problems and public health nurse concern.

Principal criteria for referral of possible squints were disconjugate eye movements and asymmetrical light reflex, followed by parent report of squint when the child was tired. 12% always referred a child where there was a positive family history of squint and 64% sometimes referred on this basis. 8% of doctors always referred pseudosquints, while 36% sometimes did.

The bases for decisions concerning referral and follow-up of children are summarised in Table 8

Table 8. Bases for decisions concerning referral and follow-up

	GUIDELINES	EXPERIENCE	OTHER/NO REPLY
Vision	26%	58%	16%
Squint	18%	54%	28%
Hearing	26%	70%	4%
Speech	6%	70%	24%
Hip Dislocation	28%	64%	8%
Heart defect	18%	60%	22%

43% of medical officers had taken part in special clinics, separate from nine-month developmental clinics, for children of any age with developmental/medical problems. 16% ran child health clinics other than the nine-month developmental, special, immunisation and school health clinics. Sources of requests for appointments in

special clinics are listed in Table 9. In 98% of cases, no computer form was completed for children attending the clinics.

Table 9 **Sources of requests for appointments in Special Clinics**

Public Health Nurses	74%
Area Medical Officers	52%
Speech Therapists	36%
Social Workers	22%
General Practitioners	20%
Others	30%

APPENDIX 4

SCHOOL HEALTH EXAMINATIONS
REPORTS BY COMMUNITY CARE AREA

COMMUNITY CARE AREA 1

PUBLIC SCHOOLS: Senior infants and 1st class for initial screening. Those with problems are re-screened in later classes.

FREQUENCY: Every second year

SPECIAL EXAMINATIONS:

(a) Appointments in local health centres

(b) Audiology clinic in Dun Laoghaire health centre bimonthly or monthly according to demand

RECENT CHANGE: Central audiology clinic. Schools are divided into deprived and non-deprived areas. Full SMI in all deprived schools with questionnaire to parents and discussions with teachers. In very deprived areas, parents receive (hearing/vision) questionnaire.

PRIVATE SCHOOLS: No examinations.

COMMUNITY CARE AREA 2

PUBLIC SCHOOLS:	1st class and others by request
FREQUENCY:	Annually
SPECIAL EXAMINATIONS:	If requested by parents/teachers.
PRIVATE SCHOOLS:	Rathgar Junior (1st class, every 2 years)
RECENT CHANGES:	Selective examination by AMO based on questionnaire completed by parents.

COMMUNITY CARE AREA 3

PUBLIC SCHOOLS:	1st, 5th and new students
FREQUENCY:	Annually
SPECIAL EXAMINATIONS:	Selective examination based on information provided by parents/guardians and teachers.
PRIVATE SCHOOLS:	Not examined

COMMUNITY CARE AREA 4

PUBLIC SCHOOLS:	Selective examination in 1st class. Others referred by parents/teachers.
FREQUENCY;	Annually
SPECIAL EXAMINATIONS:	For those missed at school examination
RECENT CHANGE:	Introduction of selective examinations
PRIVATE SCHOOLS:	Not examined.

COMMUNITY CARE AREA 5

PUBLIC SCHOOLS:	Senior infants
FREQUENCY:	Every second year
SPECIAL EXAMINATIONS:	Referrals to GPs, hospital specialists. Recall at AMOs referral clinic, monitor by AMO/PHN/ educational psychologist
PRIVATE SCHOOLS:	Not examined

COMMUNITY CARE AREA 6

PUBLIC SCHOOLS:	1st class
FREQUENCY:	Vulnerable schools targetted as often as possible
SPECIAL EXAMINATIONS:	Vision/audiometry/psychology/speech and language therapy referrals as requested.
RECENT CHANGE:	Sessional psychology service. Health education programme. Vision/hearing/educational/ psychological defects are screened.
PRIVATE SCHOOLS:	One private school in the area is low priority.

COMMUNITY CARE AREA 7

PUBLIC SCHOOLS:	No classes routinely examined
SPECIAL EXAMINATIONS:	Problems identified by parents/teachers/PHNs
RECENT CHANGE:	Above system has replaced routine SMI
PRIVATE SCHOOLS:	Not examined

COMMUNITY CARE AREA 8

PUBLIC SCHOOLS:	1st and 5th classes, and others as requested
FREQUENCY:	Annually
SPECIAL EXAMINATIONS:	Children with vision/hearing/scoliosis defects (detected by PHN screening) are invited to clinics. Concerns of other parents addressed by AMOs.
RECENT CHANGE:	All 6th class girls screened for scoliosis
PRIVATE SCHOOLS:	Not examined

COMMUNITY CARE AREA 9

PUBLIC SCHOOLS:	Selective SMI
FREQUENCY:	Annually
SPECIAL EXAMINATIONS:	Audiology and vision defects referred. Selective others including psychological and behavioural problems
PRIVATE SCHOOLS:	Not examined

COMMUNITY CARE AREA 10

PUBLIC SCHOOLS:	Junior Infants
SPECIAL EXAMINATIONS:	Psychology service now accepts referrals directly from schools
RECENT CHANGES:	Parents of Junior Infants given newly devised form. Forms reviewed by AMO and relevant children given full medical examination
PRIVATE SCHOOLS:	Not examined

APPENDIX 5

SCHOOL MEDICAL SERVICES
AREA MEDICAL OFFICERS

INTRODUCTION

The 1967 review group recommended a medical examination at six years of age, selective examination of nine-year old children, routine annual screening by the district nurse and selective further examinations. The statutory requirements under section 66 of the Health Act 1970 direct the Health Board to make available, without charge, a health examination and treatment service for pupils attending national schools. As a result, to fulfill the obligations of the Act, a significant proportion of available resources was concentrated on the examination of large numbers of healthy children. In recent years, there has been modification and change in the implementation of this policy.

The aim of this study was to detail the actual processes in place throughout the Eastern Health Board.

METHODOLOGY

All area medical officers involved in school health examinations in the Eastern Health Board received a pre-coded comprehensive questionnaire which had been piloted after development. An explanatory letter was sent with the questionnaire stating the purpose of the study and the confidential nature of the replies.

The results were analysed using SAS.

RESULTS

47 area medical officers completed the questionnaire. The frequency of school screenings ranged from yearly (19; 40.4%) to seven-yearly (1; 2.1%) to yearly screening of specified classes (12; 25.7%). The target frequency was attained in 51.1% (24) of cases.

Classes targetted for various examinations are as indicated in Table 10.

Table 10 Classes targetted for school health examinations

Examination	Jnr	Snr	1st	2nd	3rd	4th	5th	6th	Total
Hearing	7	17	23	3	8	3	14	17	
Auriscope	-	1	8	1	47	1	2	2	
Visual Acuity	7	16	21	47	8	6	20	19	
Colour Vision	1	1	1	-	-	1	1	5	10
Squint	1	14	16	-	5	4	2	6	48
CVS	-	9	3	-	-	-	-	-	12
Resp Sys.	-	9	3	-	-	-	-	-	12
UDTestes	-	9	3	-	-	-	-	-	12
Scoliosis	-	9	2	-	-	-	-	4	15
Feet	-	9	3	-	-	-	-	-	12
Height	-	11	8	-	3	-	-	2	24
Weight	-	10	5	-	1	-	-	-	16
Enuresis	-	10	4	1	2	1	-	1	19
Gen. Devlp	-	9	9	-	1	1	-	2	22
Sch Progress	2	11	9	1	2	1	3	2	31
Speech/Lge	-	10	10	1	2	-	2	1	26
Hair	6	12	3	-	2	1	-	5	29
Teeth	3	11	2	2	2	2	-	2	24
Vaccines	5	11	5	-	-	-	1	4	26

According to 70.2% (33) of the respondents, all schools were given equal priority. Where schools were prioritised, 78% (7) focussed on deprived/vulnerable areas and one (11.1%) focussed on special schools. The remaining areas focussed on both special schools and vulnerable areas.

80.9% (38) of respondents stated that questionnaires were sent to parents. The questionnaire was used as a basis for examination in 68.1% (32) of cases. 40.4% (19) invited parents to attend while children were being examined.

Children outside the targetted classes were seen by 87.2% (41) of respondents. The criteria for referral are listed in Table 11.

Table 11 Criteria for referral of school children outside targetted classes

CRITERIA	NUMBER	PERCENTAGE
Parent/Guardian concern	28	59.6%
Public health nurse concern	31	66.0%
Teacher concern	31	66.0%
All of the above	30	80.9%

The screening tests used are shown in Table 12 and the places in which the tests are carried out are listed in Table 13.

Table 12 School vision screening tests

TECHNIQUE	NUMBER	PERCENTAGE
Snellen	21	44.7%
Stycar	20	42.6%
Lighted Snellen	18	38.3%
Keystone	12	25.5%
Modified Snellen	1	2.1%
Ischihara	2	4.3%

Table 13 Sites of school vision screening tests

LOCATION	NUMBER	PERCENTAGE
Corridor	17	36.2%
Medical Room	15	31.9%
Sports' Room	15	31.9%
Health Centre	15	31.9%
Classroom	13	27.7%

27.7% (13) of respondents used 6/9 6/9 vision or worse on the Snellen chart as the minimum crietria for referral to eye specialists. 19.1% (9) used 6/12 6/12 or worse as minimum referral criteria on Keystone, and 8.5% (4) used 6/6p 6/6p or worse for referral on Stycar testing. 89.4% (42) repeated an abnormal vision test prior to referral to an outside agency.

The criteria for referring a child to an ear, nose and throat specialist are listed in Table 14. The commonest minimum audiogram criterion for referral was a 10 dB loss at two frequencies in one ear. However, criteria for referral varied so much that there is essentially no agreement among area medical officers.

Table 14 Reasons for referral to ear, nose and throat specialists

REASON	NUMBER	PERCENTAGE
Repeat abnormal audiogram	40	85.1%
Appearance of tympanic membrane	13	27.7%
History	9	19.1%
One abnormal audiogram	2	4.3%
Any of the above	5	10.6%

The sources of referral to the educational psychological service were:

teachers	37 (78.7%)
area medical officers	36 (76.6%)
public health nurses	12 (25.5%)
DCC/MOHs	8 (17.1%)

One-third (16; 34.%) used guidelines/criteria for making referrals to psychologists. The means of referrals were:

handwritten letter	21 (44.7%)
dedicated form	18 (38.3%)
voucher	2 (4.3%)
standard printed letter	1 (2.1%)

APPENDIX 6

ACCIDENT AND EMERGENCY DEPARTMENT - GENERAL PRACTITIONER INTERFACE

INTRODUCTION

The aim of the study was to explore the reasons why parents chose to attend hospital accident and emergency departments (A/E) in preference to general practitioner services, and to suggest how the situation might be managed. Specifically, the objectives of the study were:

(1) To determine the proportion of parents attending A/E who had contacted or attempted to contact GPs about their children's presenting complaints.

(2) To describe the sources of referral for attenders at A/E.

(3) To examine the reason for attendance at A/E by those parents who self-referred.

(4) To determine the proportion of parents attending A/E who could more appropriately have brought their children to general practitioners.

METHODOLOGY

One of the three major paediatric A/E units in the Eastern Health Board region was contacted and asked to facilitate this initial study. The unit receives approximately 100 new patients each day. The study was conducted over a one-week period, with every fifth new attendee included in the sample. Questionnaires were attached to A/E cards and completed by clerical, nursing and medical staff who were briefed prior to the study.

An original questionnaire was designed. However, the design was influenced by that used in Dublin in 1989 for a general hospital A/E study. SAS analysis determined frequencies, means and statistically significant associations (chi-square).

RESULTS

128 questionnaires were completed. The attenders ranged in age from 0 to 15 years with a mode of 0 to 1 year (18) and median of 4 years. Most patients (79; 61.7%) were boys. 96.9% (124) of parents provided the names of their general practitioners. The mean time in the A/E unit before being seen was 70.7 minutes, while mean total time was 135.8 minutes.

Durations of illnesses before attendances in the A/E unit and methods of referral are shown in Table 15. Of the 87 who answered the question, only 48 (55.2%) had attempted to contact their GP. 30 had succeeded in making contact, and 26 had attended their general practitioner first.

Table 15 Problem duration and referral method

DURATION	NO	%	REFERRAL	NO	%
< 12 hours	32	25.0	GP with letter	36	28.1
12 - 48 hours	27	21.1	GP no letter	9	7.0
> 48 hours	53	41.4	Contactors	5	3.9
Not answered	16	12.5	Other	2	1.6
			Self referral	62	48.4
			Not answered	14	10.9

For 48 of those who were self-referrals, reasons for not attending their GP were:

Needed immediate attention	9 (18.8%)
GP not available	8 (16.7%)
Prefer hospital	7 (14.6%)
Already under hospital care	7 (14.6%)
Hospital more convenient	6 (12.5%)
Thought GP would refer anyway	5 (10.4%)
Thought needed an X-ray	4 (8.3%)

Investigations and treatments which attenders received in the Accident & Emergency Department are listed in Table 16.

Table 16 Accident & Emergency Department Investigations & Treatments

INVESTIGATION	NO	%	TREATMENT	NO	%
None	29	25.2	Bandage	6	7.0
X-ray	33	28.7	POP	2	2.3
Bacteriology	6	5.2	Steristrip/glue	2	2.3
Blood test	10	8.7	Suture	2	2.3
Toxicology	1	0.9	Observation	10	11.8
Urinalysis	27	23.5	Nebuliser	7	8.2
Other	9	7.8	Medication	47	55.3
Total	115			85	

93 attenders replied to the question on follow-up. Follow-up for the majority (42; 45.2%) was left to the discretion of parents/guardians, and there was follow-up by the family doctor in 32 cases (34.4%), at outpatients' departments for 11 (11.8%) and in the A/E department for 8 (8.6%).

Evaluation of the presenting complaint by the attending doctor, shown in table 17, indicates that the majority could have been treated by their general practitioners.

Table 17 Problem Evaluation by Attending Doctor

	NO	%		NO	%
Admit	19	14.8	Obs & D/C	3	2.3
Invest & D/C	14	10.9	GP Rx + OPD refer	11	8.6
Invest, Rx & D/C	14	10.9	GP Rx & follow up	26	20.3
			GP Rx	37	28.9
			(not answered = 4)		

However, the problem evaluation for those who were self-referred was:

Admissions	11 (16.7%)
Investigate & discharge	9 (13.6%)
Investigate, Rx & D/C	9 (13.6%)
Obs + D/C	2 (3.0%)
GP Rx + ref OPD	6 (9.1%)
GP Rx + GP follow-up	12 (18.2%)
GP Rx	17 (25.8%)

DISCUSSION

The results presented here are those of the initial analysis only. Further work is needed to analyse within the subgroups of diagnoses, places of residence and times of day.

The results indicate that A/E services are, on the whole, used by parents/guardians of very young children, the majority of whom could nominate a family doctor. A substantial majority (41.4%) of attenders had suffered the presenting problem for over 48 hours, suggesting that the problem was not an emergency. Despite most having a family doctor, 48% were self-referrals for a variety of reasons. This suggests that to change the pattern of use of A/E and GP services ~~requires~~ a broad-based re-education programme and not a single item approach as attempted in the past.

The survey was a pilot study and further analysis is ongoing. Results, and in particular those of the problem evaluation table, indicate the need for a larger study to identify why parents use A/E departments in preference to the GP service.

REFERENCES & PAPERS

THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND
FACULTY OF PUBLIC HEALTH MEDICINE - MEMBERSHIP PART 2

1984 Z. Johnson. Consumer satisfaction with maternity services.

1991 A.L. Keane. Reasons for non-attendance at a developmental examination in early childhood.

1992 A. Clarke. Low immunisation coverage rates: fact or fiction?

1993 Geraldine Brophy. A school vision screening study - comparison of the validity of the Keystone and Snellen tests.

GENERAL STUDIES/REFERENCES

Shaping a Healthier Future. A strategy for effective healthcare in the 1990s. Department of Health 1994.

Health in the Eastern Health Board 1994. Eastern Health Board 1994.

Review of Adequacy of Child Care and Family Support Services 1994. Eastern Health Board 1994.

Health for all Children. A Programme for Child Health Surveillance. Hall 1992.

Public health nursing and child health care. Dolores O'Neill (IPA) (1994).

Public Health Nursing Service (IPA). Resources Planning and Management Information System.

Consumer Participation in the Child Health Services - a national pilot study. The Institute of Community Health Nursing (1995).

Ophthalmic Services for Children: Report of a Joint Working Party (1994). Royal College of Ophthalmologists and the British Paediatric Association.

The assessment of vision in the preschool child. Sonsken P.

School Health Services: a brief review. O'Connor M (1993).

Report of Strategy Task Force on Child Health. Eastern Health Board, 1995.

Accident and Emergency Report. Hynes M, O'Connor S. EHB 1990.

Preschool Health Services (MPH thesis). Kiernan R (1993).

Developing a Policy for Women's Health. Department of Health, 1995.

Child Health Services (MFPHMI thesis). Brennan P.

The Way Forward. Eastern Health Board, 1994.

COMMUNITY CARE RESEARCH

(In addition to publications mentioned elsewhere)

Referral Monitor Surveillance System of referrals to specialists from pre-school and school services (CCA 2).

Value of monitoring height in the school child (CCA 4).

Psychological (educational) assessment needs of South Inner City schoolchildren - 1995 (CCA 3).

A report on the health status of the population in five DEDs of the south inner city - 1992 (CCA 3).

The Health and Welfare needs of single parents - EHB 1994 (CCA 3).

An audit of MMR immunisation of inner city school children 1993 (CCA 3).

Joint Study with the Irish College of General Practitioners and Royal College of Surgeons in Ireland on "Barriers to Childhood Vaccination Uptake" (CCA 3).

DUBLIN UNIVERSITY
DISSERTATIONS FOR M.Sc

1992 Mary M. Healy
Factors that influence expectant mothers to choose combined antenatal care.

1991 Sheelagh Prosser
An examination of non-attendance at a paediatric out-patient service.

1991 Brenda Molloy.
Effects on providers participating in a parent support programme.

1988 Fiona Ryan
Factors influencing the consultation rates of pre-school children.

1987 Una Nic Fhionnlaoich
The determination of visual acuity in 5th year school students.

1986 Narjis a. H. Ajeel
Developmental Clinics: How effective are they?