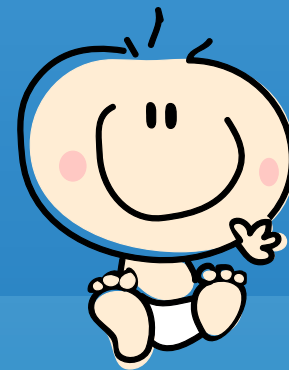


“Six Week Baby Check in General Practice” Project

A conjoint approach to quality assurance of child health screening, surveillance and health promotion in Irish general practice, supported by the Health Service Executive West (Donegal, Sligo, Leitrim & West Cavan), the Irish College of General Practitioners (ICGP) and Best Health for Children (BHFC) / Programme of Action for Children (PAC)

March 2006



“Six Week Baby Check in General Practice” Project

“The gap between what we know and what we don’t know is much less than the gap between what we know and what we do”

Don Berwick



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive



"Six Week Baby Check in General Practice" Project



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Health Service Executive West (Donegal, Sligo, Leitrim & West Cavan)



Best Health for Children / Programme of Action for Children and



Irish College of General Practitioners

Prepared by Lynne McBride and Christine McMaster

March 2006

foreword

The check that babies are offered at 6 weeks of age is a key part of an evidence based child health surveillance and screening service, and is a routine part of the work of most General Practitioners. However, up until now there has been little opportunity to look at the quality of this service.

This project represents a very important and innovative approach to improving the quality of services provided to parents and children.

It demonstrates how primary care plays a central part in child health surveillance and shows how evidence may be translated into practice and result in greater satisfaction for parents and better outcomes for children.

It also shows how improvements can be made in services that, although ‘low tech’ and routine, have real potential in terms of not only detecting problems at an early stage but also providing opportunities for promoting health.

This project was only possible because of the close working between the Irish College of General Practitioners and the Health Service Executive through the Programme of Action for Children. It demonstrates the potential of such collaborations for improving the service professionals are able to give, by both involving them directly and supporting them through training.

On behalf of the project steering group, we would like to thank all those involved in the project, and in particular the parents and babies, the General Practitioners and their teams who made it such a success.

The challenge now will be to ensure that all babies and their parents can receive a service of this quality. This project will certainly have played a key point in achieving this.

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Executive Summary

Introduction

All children in Ireland have the right to access a national programme of core health services, which aims to identify health problems early, offer effective interventions and provide support to families in helping their children to achieve the best possible level of health and well being.

An evidence based framework for the equitable delivery of integrated and child centred health services is contained in the strategic report *Best Health for Children – Developing a Partnership with Families, 1999* and its recent review *Best Health for Children Revisited, 2005*. Both emphasise the importance of universally accessible services for all children and families, provided by primary and community care based practitioners, who work in multi-disciplinary teams against a background of professional training and local knowledge.

The primary care strategy *Primary Care – A New Direction, 2001* provides a blueprint to develop primary care teams as a cornerstone of modern health service delivery. There is potential for an extended role of primary care in child health screening, surveillance, health promotion and family support, which is supported by evidence for the effectiveness of such services being provided in primary care.

In this context, the Health Service Executive West (Donegal, Sligo, Leitrim and West Cavan) in co-operation with the Irish College of General Practitioners (ICGP) and the Programme of Action for Children (PAC) presents in this report the findings of a project to develop a new model for the 6 week baby check under the statutory Maternity and Infant Care scheme (MIS) as part of the national core child health programme.

Aims and objectives

Regardless of universal entitlement to this service, uptake rates throughout the country vary widely, and there are currently no effective mechanisms to monitor service delivery, performance and outcomes. This project provides an explicit standard in line with currently available evidence and best practice regarding:

- Clinical content,
- Health promotion and family support,
- Staff training,
- Data collection, analysis, integration and sharing and
- Service monitoring.

It is based on an assessment of existing practice in consultation with service users and providers.

Project methodology

Fifteen GPs and nine Practice Nurses from nine primary care practices in HSE West (Donegal, Sligo, Leitrim and West Cavan) participated in the project.

Following a skills update training module, they assessed 284 babies in accordance with the new model between November 2004 and August 2005. Data were collected electronically with software developed for the project and analysed both by HSE West (Donegal, Sligo, Leitrim and West Cavan) and the Independent National Data Centre at the ICGP.

The project was funded by Regional Children's Services and developed in co-operation with Management Services in HSE West (Donegal, Sligo, Leitrim and West Cavan) and the Postgraduate Resource Centre of the ICGP in conjunction with the Programme of Action for Children (PAC). It was supported by a GP project officer employed by the ICGP and funded by HSE. A multidisciplinary regional steering group advised on the development, delivery and evaluation of the project, which was overseen by a project board.

Assessment of existing practice

Estimated uptake rates for the MIS and 6 week baby check are very high in HSE West (Donegal, Sligo, Leitrim and West Cavan) at 90 - 100% amongst practices participating in the project. In a predominantly rural area with remote access to secondary care provision, the model of shared antenatal care is strong, leading to higher levels of awareness that postnatal care is also available in primary care.

“The Doctor and the Public Health Nurse reminded you that you had to go for the 6 week check, which I thought was very good, because you could easily forget.”

While not familiar with the actual MIS, most mothers were informed that the check was free.

“I wasn’t told about it, but I heard it that it was free”.

“Not until afterwards when I was on my way out, but the lady at reception told me when I went to pay.”

Service user satisfaction as assessed prior to implementation of the new model was high,

“Very ordinary, comfortable, it’s nice to get the baby checked to clear up any worries that you might have. To hear somebody else telling you that she’s doing well.”

“Oh, yeah, they take their time, they don’t seem to be oh, looking at their watch and that, they take their time to complete it and they’re very careful.”

but knowledge about the purpose of the 6 week check limited.

“I had never been told, nobody discussed it to say what should or shouldn’t happen at it. To a certain extent, I would feel even now, I’m not really sure what should have taken place.”

“Basically the way I see it, it’s just a way of getting the baby weighed to see how he’s doing over the first couple of weeks. Any queries that you might have are cleared up, basically an introduction to the GP for the baby.”

Prior to the project, primary care providers appreciated the importance of the 6 week baby check, but expressed concern about inadequate structures and processes underpinning its delivery and evaluation:

- Inadequate standardisation of 6 week baby check content
- Restricted access to secondary referral services for children
- Anachronistic data collection processes (only two of 15 GPs participating in the project used the ‘white card’ for shared care; all expressed dissatisfaction with lack of feedback from HSE)
- Insufficient links between primary and community care based service providers, i.e. Public Health Nurses, GPs and Practice Nurses (despite high regional levels of postnatal Public Health Nurse visiting of mothers and babies)
- Need to renegotiate MIS and GP contract

There was wide variation regarding:

- Length of time for 6 week baby check (10 - 30 minutes)
- Levels of Practice Nurse involvement
- Combining 6 week baby check with baby’s primary immunisations or postnatal check of mother

Recruitment of General Practitioners and Practice Nurses

Participation in the project was offered to all GPs on ICGP and HSE West (Donegal, Sligo, Leitrim and West Cavan) databases. Practices needed to be part of the secure primary care HSE e-mail network and computerised, using one of the two main GP software providers in HSE West (Donegal, Sligo, Leitrim and West Cavan).

Participation in the project was restricted to no more than three GPs from any group practice and attracted a fee of €400 per GP. In addition to the existing MIS fee of €29.74, GPs received €40 for each baby assessed in accordance with the new model for the 6 week baby check.

These arrangements were agreed by the participants for the purpose of this project only and without prejudice to the future position of any of the parties in MIS fee negotiations.

Training module

All GPs and Practice Nurses participating in the project undertook a multidisciplinary skills update course designed and delivered as part of the project. This was approved both by the ICGP and An Bord Altranais. It consisted of training in relevant aspects of child health examination, health promotion and data management.

Data collection

A set of data to be collected by primary care providers at the 6 week baby check was agreed between steering group, HSE, ICGP and software vendors. Analysis of non-anonymised data was undertaken by HSE and INDC received anonymised data for service monitoring purposes.

A service user information leaflet was designed to fulfil informed consent requirements and received approval from the Office of the Data Protection Commissioner.

One out of 14 GPs providing feedback experienced problems with use of the programme, three expressed concern about content, four felt that the data set was lengthy and all experienced problems with the secure HSE e-mail connection for data transfer.

Results

- 35% of mothers held a medical card
- 31% of mothers' marital status was 'single'
- 3% of births were to mothers aged 19 years or younger
- 95% of mother recalled having received a visit from their Public Health Nurse
- 15% of babies seen for the 6 week baby check were breastfed (GMS 5%, non GMS 21%)
- 20% of mothers said they had smoked during pregnancy (GMS 37%, non GMS 12%)
- 24% of babies were exposed to Environmental Tobacco Smoke (ETS) when attending for 6 week baby check, according to their mothers (GMS 38%, non GMS 17%)
- 80% of babies were living in households with two parents

Feedback from parents and professionals

57 mothers were sent an evaluation questionnaire, and 27 (47.3%) replied.

- Only four mothers recalled having received the information leaflet.
- 26 mothers agreed or strongly agreed that:
 - they were satisfied with the examination of the baby,
 - they felt comfortable asking questions of health professionals during the 6 week check and
 - enough time had been given to the check.

"very thorough and not rushed, time was taken and everything was covered."

Suggestions from parents:

- Invitation for 6 week baby check via appointment card
- Provision of more information, including leaflets, about 6 week baby check
- Attention to mothers' wellbeing

Thirteen out of 15 GPs returned a completed evaluation questionnaire.

- Time taken to complete check had increased to 20-30 minutes
- Eleven of 13 GPs were involving their Practice Nurse, compared to eight of 14 prior to the project.

"caused us to focus and involve other staff"

- Contrary to recommendations for good clinical practice, only two of 13 GPs carried out baby checks at 6 weeks of age at the end of the project, compared to seven of 14 prior to the project.

- Five GPs combined the 6 week baby check with giving primary immunisations, experienced as particularly stressful by mothers.
- Ten GPs reported a change in their approach to health promotion.

"more time spent discussing safety, accident prevention, feeding and recognising illness"

- Six GPs changed the content of their clinical examination of babies as a result of the project.

"parents seemed to feel that they had more opportunity to ask questions and were impressed by the detail of the examination"

"tightened up the clinical examination and gave mothers more time to talk"

- Eleven GPs favoured continuation and national dissemination of the project.

"it would seem a pity not to continue it"

"well organised and structured"

"it is definitely beneficial"

Recommendations

- To include new model for 6 week baby check in national GP contract renegotiations
- To encourage access of all children and families to the 6 week baby check in primary care

“we felt it was better to have a 6 week check with our own GP, rather than waste time at the hospital with a stranger”

“introduce our baby to our family doctor”

- To facilitate feedback on health behaviours of practice populations to primary care providers
- To provide multidisciplinary training of primary care providers in child health
- To assess the performance and impact of child health service provision through research, monitoring, evaluation and feedback
- To disseminate information for parents on the 6 week baby check through national introduction of the parent held Personal Health Record (PHR)
- To further integration and sharing of child health data between different disciplines and agencies providing services for children
- To introduce comprehensive patient registration

1.1 Background

In 1996, a national review of child health services for the 0 - 12 year age group in the Republic of Ireland (ROI) was commissioned. The findings and recommendations resulting from this comprehensive process were published in 1999 in form of a strategic report called *Best Health for Children-Developing a Partnership with Families, 1999 (BHFC)*.¹ A national project team was established in 2000 to drive the implementation of the report’s recommendations. BHFC became a national programme under the umbrella of the Health Board Executive (HeBE) and was given an extended role in the development of a national service framework for integrated children’s services, the *Programme of Action for Children (PAC)*.

The BHFC report, endorsed in the National Health Strategy *Quality and Fairness – A Health System for You*² in 2001, is based on an assessment of existing child health service provision. Its recommendations for best practice in a national statutory core child health programme are drawn from international research based evidence and consultation with service users and providers in ROI, underpinned by the principles of quality assurance through standardisation of service provision, training of staff, information management, improved communication and accountability. There is an emphasis on partnership with parents, equity and the importance of moving to a child centred model of service provision. In line with the developmental nature of evidence based practice, the national core child health programme as outlined in BHFC was reviewed recently (*Best Health for Children Revisited, 2005*),³ and its recommendations are reflected in the new model for the 6 week baby check reported here.

The Primary Care Strategy *Primary Care – A New Direction*⁴, published in conjunction with the National Health Strategy, underlines the importance of primary care as a cornerstone of modern health services, not just in the areas of diagnosis and treatment, but also in relation to prevention and health promotion. There is the potential for an extended role in child health surveillance, supported by a framework for

quality assurance. Better links between primary and secondary care, as well as improved team working at primary care level through joint training and education of professionals, need to be developed. The existing unique position of Irish general practice to provide locally accessible services in the context of long term relationships and continuity of care is acknowledged.

1.2 Current practice

The Maternity and Infant Care Scheme (MIS) provides for free antenatal, intrapartum and postnatal care for mothers and their children up to 6 weeks after birth. It is available to all women on application to health boards and is delivered in the form of eight general practice assessments, mostly through a model of shared care with hospital maternity units.⁵

The agreement between the Department of Health and Children (DoHC) and the Irish Medical Organisation (IMO) in respect of the MIS, Appendix 1, November 1999, describes the 6 week postnatal visit as an opportunity to review the general health of the baby, to conduct a developmental examination, to review feeding practice and overall management of the baby and to finalise immunisation plans. GPs are requested to forward health information concerning the baby (e.g. centile measurements, developmental status and information on any abnormalities) to the Senior Area Medical Officer (SAMO) of the health board, but recorded on the combined care card are only the weight of the baby at the time of the 6 week visit, the birth weight, outcome of delivery and type of feeding.

BHFC recommends the examination of all infants at the age of 6 to 8 weeks and the development of a standard set of data to be recorded on each child at the time of that examination.¹ The report notes the currently low uptake rate of the MIS throughout the country at 54% and the lack of standardisation of the 6 to 8 week infant examination, which is presently provided in four alternative ways:

- GPs contracted under the MIS,
- GPs contracted privately,
- Paediatricians contracted privately and
- Maternity hospitals.

A community based prospective study of 463 mothers in the North Eastern Health Board (NEHB) area during 2002 found high overall uptake rates for the 6 week postnatal examination of 89% for mothers and 97% for their children, respectively.

77% of women had attended shared antenatal care involving GPs, but only 26% of women and 55% of infants attended a GP for the 6 week postnatal examination.⁶ The study underlined the potential of the 6 week postnatal examination in general practice for establishing a relationship with mother and baby, as well as providing support and health promotion advice. It called for adequate remuneration of such service provision in general practice to support a shift from secondary to primary care.⁷

The counties Donegal, Sligo, Leitrim and a small section of West Cavan in the HSE West area have a population of 221,336 according to the 2002 census. The North West has high levels of deprivation and the highest dependency ratio of all health boards in the country. Approximately 45% of the population are medical cardholders, compared to an average of 30% in the remainder of ROI. In 2002, there were 118 GPs holding a GMS contract, working in 76 GMS practices, and a number of private GPs. The number of births to mothers resident in the region is approximately 2,800 annually. In 2002, 3,281 contracts under the MIS were signed, indicating a very high uptake of antenatal and postnatal care offered in general practice.

With existing data information systems, it is currently not possible to ascertain uptake figures for the 6 to 8 week postnatal examination in general practice, other than at the level of individual practices. Valuable information on health status of infants remains unutilised, and there is no process to measure outcomes. In the absence of a quality assurance system, it is difficult to assess the level of service provision, its standard, resources required, service user satisfaction and outcomes.

These information gaps also currently exist in many parts of ROI in relation to the remainder of statutory child health screening, surveillance and health promotion services. With DoHC funding, HSE West (Clare, Tipperary & Limerick) have in consultation with parents and service providers developed and implemented a parent held Personal Child Health Record (PHR), in which all assessments of children recommended by the national core child health programme are recorded. Data are electronically collected and analysed, giving a picture of the health history of individual children, while also describing uptake of and outcomes from the universal child health programme, as well as generating performance indicator and service activity data. A unique opportunity exists to integrate data collection from the 6 week baby check in general practice with the data processed by the PHR IT support system.⁸

This project provides the tools to realise this potential, pending national dissemination of the PHR, which requires resources and a mandate both at regional and national levels.

1.3 Evidence for the 6 to 8 week examination of infants

There is evidence for the positive effect of good universal primary health care provision on child and population health outcomes.⁹ Content and timing of child health screening and surveillance programmes have been increasingly subjected to scrutiny, and evidence from international research supports a shift in focus from clinical examination at regular intervals to health education, health promotion and support for parents.¹ An examination of infants at the age of approximately two months is considered useful, with a smaller yield than the neonatal examination, but one that is still significant.¹⁰ GPs have been found effective in detecting key physical abnormalities in preschool children in the context of child health surveillance and screening programmes.¹¹

While the usefulness of the 6 week postnatal check in its current form has been questioned in relation to women,¹² the examination of all babies by the age of 8 weeks is supported by evidence

from research as outlined below. There is little evidence for or against physical examinations for screening purposes beyond this age.¹³

Developmental assessment. The first edition of *Health for All Children* emphasised the value of parental observation in identifying areas of concern regarding the developmental progress of children.¹⁴ This is acknowledged in the broader concept of developmental surveillance, described as a flexible and continuous process, which considers the developmental history, monitors progress and attends to parental observations within the context of children’s overall wellbeing.¹ When examining infants at 6 to 8 weeks of age, there are no definitive tests to be carried out, other than an assessment of tone and observation of spontaneous movements.

Vision. The baby should show a range of behaviours, including smiling and visual following. The red reflex needs to be elicited to confirm the absence of cataracts and to examine for retinoblastoma.

Congenital heart disease. Early detection is desirable to avoid children presenting with acute heart failure or with irreversible haemodynamic changes secondary to undiagnosed congenital cardiac malformations. These might predispose to endocarditis if antibiotic prophylaxis is not prescribed during invasive procedures.¹⁵ Most cases present shortly after birth, but some conditions like small ventriculoseptal defect (VSD), atrioseptal defect (ASD) or coarctation of the aorta may not present until later and might be more easily detected at 6 to 8 weeks of age. Routine cardiovascular examination as part of a screening programme for all infants is therefore indicated, including history, observation and palpation of femoral pulses.

Testicular descent. Incomplete or abnormal testicular descent is a common problem in infant boys - approximately 6% are affected at birth. In the majority of these children, testicular descent is complete by 3 months of age. Children born prematurely (<37 gestation) might experience spontaneous testicular descent until the age of 6 months. Thereafter, spontaneous resolution of the problem is very unlikely. It is therefore necessary to screen all boys at birth and at 6 to 8

weeks of age.¹⁶ Children with abnormal findings are referred to a surgeon with appropriate skills before the child reaches one year of age to undergo surgery during their second year to avoid damage to the undescended testis and fertility problems.¹³

Developmental dysplasia of the hip (DDH).

This term is now preferred to ‘congenital dislocation of the hip’, as it covers a broader range of conditions affecting the stability of the hip joint. The aim of a screening programme is early identification of children at risk of hip dislocation in order to commence treatment. Both ultrasound imaging and clinical examination as primary screening procedures produce a significant number of false negative results and have not been shown conclusively to reduce the number of children requiring surgery. There are also high numbers of false positive results, leading to unnecessary referral, investigation and conservative treatment with abduction splinting.¹⁷ The main means of finding late or missed cases is detection of limited abduction and asymmetric skin creases after the neonatal period,¹⁶ but these findings are unspecific. Occasionally, children present more after they learn to walk with a waddling gait.

Although the evidence supporting clinical examination of infants at 6 to 8 weeks of age as part of a screening programme for DDH is insufficient, this might be the only opportunity for detection of presymptomatic cases and should therefore be included in the 6 to 8 week check.¹³

Growth monitoring. The potential benefits of growth monitoring are identification of chronic disorders, reassurance to parents, and generation of epidemiological data for public health purposes and research.¹⁸ Growth during infancy is measurable in weight, length and head circumference. It is recommended that children should be weighed at birth, at immunisations and during child health surveillance checks.¹⁸ Accurate technique is required to obtain reliable results, identifying those children who require further monitoring and intervention. There is a need to provide adequate training in measurement technique, use of growth charts and criteria for referral to those involved in growth monitoring of children.

Parental concerns. These always need to be taken into consideration, as parental observation has been shown to be as effective as assessment by health professionals in detecting problems in many areas of child health and development.^{1,11}

Table 1 Recommended content of 6 to 8 week examination of infants

Item	Examination (including history and parental concern)
Development	Tone and movements, smiling
Vision	Visual behaviour, history, red reflex
Hearing	“Can your baby hear you?”³
Cardiovascular system	Colour, respirations, heart sounds, femoral pulses
DDH	Skinfold symmetry, range of movement, Ortolani & Barlow test, Galeazzi sign, leg length
Testicular descent	Clinical examination
Growth monitoring	Weight (record on centile chart); head circumference and length only if clinically indicated
Health promotion	Immunisation, nutrition, parental smoking, sudden unexpected death in infants (SUDI), unintentional injury prevention, recognition of illness

1.4 Project rationale

Although there are limitations to clinical examination of infants as a screening tool in the context of the 6 to 8 week postnatal examination, it may be the only opportunity to detect conditions listed above for early and effective intervention.¹⁵ The quality of a screening programme as described here depends on the context of an adequate early detection programme or system to support it.¹³ This should include:

- Clear examination protocols
- Appropriate staff training
- Clear referral criteria and pathways
- Standardised follow- up procedures
- Good communication between service users and professionals in primary and secondary care settings
- Clear documentation of clinical findings and outcome measures
- Strategies to reach children from marginalised groups

The Irish setting differs from the situation in other countries with universal free access to primary care, making the provision of a standardised and quality assured child health surveillance and screening programme a higher priority. GPs in ROI work in close proximity to the communities they serve. This gives them unique insight into the social, economic and political context of child health issues at a local level and offers equal access opportunities, which are currently restricted by the two tier system in Irish health services.

The provision of antenatal and postnatal care in conjunction with child health services offers an opportunity to develop a relationship between a family and their GP, on which to base the practice of family medicine. Prevention and health promotion are to become an increasingly important part of primary care provision, and it is therefore necessary and appropriate to augment GPs’ role in the delivery of child health programmes.

Quality assurance through evidence based practice, staff training, improved communication, service monitoring, outcome measurement and accountability underpin the vision for child health outlined in *BHFC*. There is a need for more integration of child health services to develop child and family centred models of service provision. This will lead to improved outcomes and better use of resources.¹⁹ HSE West (Donegal, Sligo, Leitrim & West Cavan), the ICGP and BHFC/ PAC recognise the importance of Irish general practice in this regard. Interagency partnerships developed through this project can support increased co-operation of service providers to achieve better child health outcomes.

2.1 Project aim

- To standardise and improve existing service provision under the MIS for examination of babies aged 6 to 8 weeks in general practice in line with *BHFC* recommendations and evidence for best practice

2.2 Project objectives

- To provide an assessment of existing practice
- To develop, test and implement a standard for best practice in consultation with service providers and service users
- To develop, test and implement processes for improved communication between service providers and service users
- To develop, test and implement data collection and analysis mechanisms for monitoring, review and audit purposes
- To inform developments at national level in the area of child health and child care information technology
- To facilitate the development of data sharing protocols
- To develop and test a training programme for primary care practitioners delivering child health services at the 6 to 8 week examination of infants
- To provide a written evaluation of the project
- To commence the development of structures and processes for conjoint working between HSE, primary care providers, the ICGP and PAC in the area of child health
- To disseminate and implement recommendations from the project through educational and service development frameworks
- To support renegotiation of the GP contract at national level

3.1 Project plan

Phases 1 and 2 of the project (November 2003–November 2005) addressed the development and testing of an improved model for best practice in the general practice setting of HSE West (Donegal, Sligo, Leitrim & West Cavan), supported by a project officer working under the direction of a multidisciplinary regional steering group.

Phases 3 and 4 deal with the development and utilisation of regional and national frameworks to disseminate the outputs of the project. This process is overseen by a project management team, initially with representation from HSE and the ICGP, but also requiring involvement of stakeholders from the area of industrial relations in the context of national renegotiation of the GP and MIS contracts.

See **Appendix A** for full project plan.

3.2 Roles and responsibilities

Project management team membership

- Dr. Michael Boland, Director of Postgraduate Resource Centre, ICGP
- Mr. Dermot Folan, Assistant Chief Executive Officer, ICGP
- Dr. Christine McMaster, Regional Child and Adolescent Health Development Officer, HSE West (Donegal, Sligo, Leitrim & West Cavan)
- Mr. Sean Hannigan, Senior Financial Officer, HSE West (Donegal, Sligo, Leitrim & West Cavan)

Role of management team

- To monitor implementation of project plan in accordance with proposed time and financial allocation
- To oversee work of steering group and project officer
- To maintain responsibility for decisions on how to deal with risks and opportunities that arise
- To maintain responsibility for any changes that may need to be made to project plan

Steering group membership

- Dr. Michael Boland, ICGP, Dublin
- Dr. Brenda Corcoran, PAC, Dublin (replaced Dr. Ailis Quinlan in June 2004)
- Ms. Josephine Heward, Practice Nurse, Health Centre, Lifford, Co. Donegal (replaced Ms. Ursula Molloy in February 2005)
- Dr. Declan Loftus, General Practitioner, Drumshambo, Co. Leitrim (replaced Dr. Siobhan Tobin in May 2005)
- Ms. Catherine McBride, Assistant Director of Public Health Nursing, HSE West (Donegal, Sligo, Leitrim & West Cavan)
- Dr. Lynne McBride, Project Officer, ICGP, Co. Donegal
- Ms. Maeve McDermott, Cardiovascular Strategy Facilitator, Primary Care Development Unit, HSE West (Donegal, Sligo, Leitrim & West Cavan)
- Dr. Seamus McGuire, Consultant Paediatrician, HSE West (Donegal, Sligo, Leitrim & West Cavan), Letterkenny General Hospital, Co. Donegal
- Dr. Christine McMaster, Regional Child & Adolescent Health Development Officer, HSE West (Donegal, Sligo, Leitrim & West Cavan), Letterkenny, Co. Donegal
- Dr. Philip Murphy, General Practitioner, Bundoran, Co. Donegal (replaced Dr. Majella Grealish in May 2005)

Role of steering group

- To advise on development of approaches to achieving aims and objectives of project
- To explore and make recommendations on ethical and operational issues
- To work with project officer on aspects of project appropriate to individual role and expertise
- To contribute to evaluation of project
- To represent views of and communicate with professional colleagues
- To attend quarterly meetings

Participating GPs

- Dr. Paul Armstrong, Health Centre, Lifford, Co. Donegal
- Dr. John Mark Dick, Health Centre, Skreen, Co. Sligo
- Dr. Majella Grealish, Bayview Practice, Ballyshannon, Co. Donegal
- Dr. Karena Hanley, Health Centre, Rathmullan, Co. Donegal
- Dr. Ciaran Kelly, Health Centre, Lifford, Co. Donegal
- Dr. Raymond Kerr, Bayview Practice, Bundoran, Co. Donegal
- Dr. Declan Loftus, Health Centre, Drumshambo, Co. Leitrim
- Dr. Denis McAuley, Millbrae Surgery, Stranorlar, Co. Donegal
- Dr. Colette McGrory, Health Centre, Lifford, Co. Donegal
- Dr. Diarmuid Mee, Health Centre, Carrigart, Co. Donegal
- Dr. Padraic Mitchell, Millbrae Surgery, Stranorlar, Co. Donegal
- Dr. Philip Murphy, Bayview Practice, Bundoran, Co. Donegal
- Dr. Tommy Nunan, Health Centre, Rathmullan, Co. Donegal
- Dr. John Sheeran, Health Centre, Cloughan, Co. Donegal
- Dr. David Swann, Medical Practice, Riverstown, Co. Sligo

Participating Practice Nurses

- Ms. Tina Bouvaird, Practice Nurse, Health Centre, Lifford, Co. Donegal
- Ms. Grace Duffy, Practice Nurse, Health Centre, Carrigart, Co. Donegal
- Ms. Fiona Gibbons, Practice Nurse, Millbrae Surgery, Stranorlar, Co. Donegal
- Ms. Josephine Heward, Practice Nurse, Health Centre, Lifford, Co. Donegal
- Ms. Niamh Kilcullen, Practice Nurse, Health Centre, Skreen, Co. Sligo
- Ms. Eileen McDevitt, Practice Nurse, Health Centre, Rathmullan, Co. Donegal
- Ms. Valerie Quinn, Practice Nurse, Medical Practice, Riverstown, Co. Sligo
- Ms. Elsie Stewart, Practice Nurse, Millbrae Surgery, Stranorlar, Co. Donegal
- Ms. Cathy Taffe, Practice Nurse, Health Centre, Cloughan, Co. Donegal

Role of GPs and Practice Nurses

- To attend skills update day
- To complete 6 week baby check in accordance with new standard model
- To complete IT proforma for 6 week baby check as developed for project and return data to HSE West (Donegal, Sligo, Leitrim & West Cavan) and Independent National Data Centre (INDC) at ICGP on a monthly basis for data analysis and generation of payment
- To communicate to project officer any difficulties arising during participation in project

- To contribute to the evaluation of project

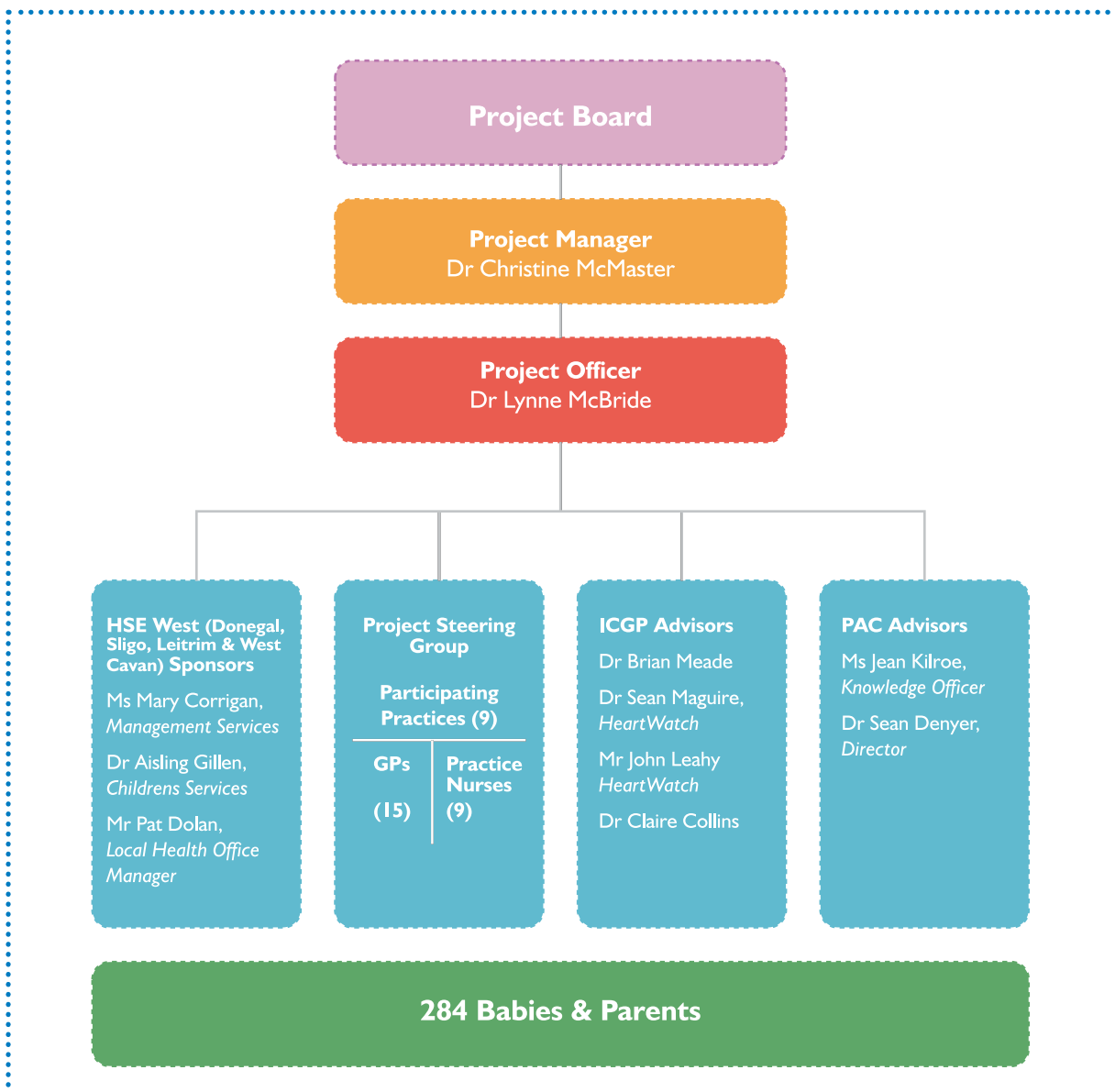
Project officer

Dr. Lynne McBride was employed by the ICGP for the duration of the project for two sessions per week.

Role of project officer

- To work towards achieving objectives of the project by undertaking necessary actions in co-operation with other project participants
- To work under direction of steering group and report to members of project management team

3.3 Project structure



3.4 Project implementation summary

Evidence based clinical standard

Steering group members met in November 2003 for a workshop to discuss the evidence base for the value and content of the 6 week baby check in general practice. This resulted in recommendations for clinical and health promotion content of the new model, on which the development of the training curriculum and data set for collection and analysis were based.

Assessment of existing practice

Consultation with GPs and Practice Nurses took place during January and February 2004 through local ICGP faculty meetings in Donegal and Sligo, as well as a Practice Nurse Association meeting in Donegal. Based on a presentation of the evidence base and steering group recommendations for the clinical standard, variations in existing practice were identified (see **Sections 4.2 and 4.3** of this report for details).

Following recruitment of practitioners participating in the project, a more detailed and systematic assessment of existing practice was carried out in form of a questionnaire (see **Appendix B**), which also served to identify training needs (see **Sections 4.1 and 6**).

An assessment of service users' views took place in March 2004 in form of in depth interviews with 10 mothers from three different practices in Donegal who had recently attended the 6 week baby check with their child. Qualitative analysis showed a high level of service user satisfaction with existing service provision, but a low level of awareness of the purpose and content of the 6 week baby check (see **Section 4.4**).

Testing of clinical standard

The feasibility of implementing the newly developed clinical standard in the environment of a busy GP surgery was initially tested by the project officer. It emerged that time required for delivery of a comprehensive 6 week baby check required approximately 30 minutes practitioner time.

Recruitment of project practitioners (GPs and Practice Nurses)

This process took place in early summer 2004. All GPs known to be practising in HSE West (Donegal, Sligo, Leitrim & West Cavan) according to ICGP and HSE West (Donegal, Sligo, Leitrim & West Cavan) primary care development unit databases were invited to apply to participate in the project. The format of the application process was based on selection criteria similar to those used in the ICGP 'HeartWatch' project and allowed for a transparent and equitable selection process overseen by the steering group (see **Appendix C**).

Care was taken to recruit a range of practices representative of those in existence in HSE West (Donegal, Sligo, Leitrim & West Cavan), including group and single handed practices in a variety of geographical locations. It was essential that practices used one of two main IT support systems and were electronically linked to HSE West (Donegal, Sligo, Leitrim & West Cavan) via a designated secure e-mail network (see **Section 5**).

Training needs assessment and curriculum development

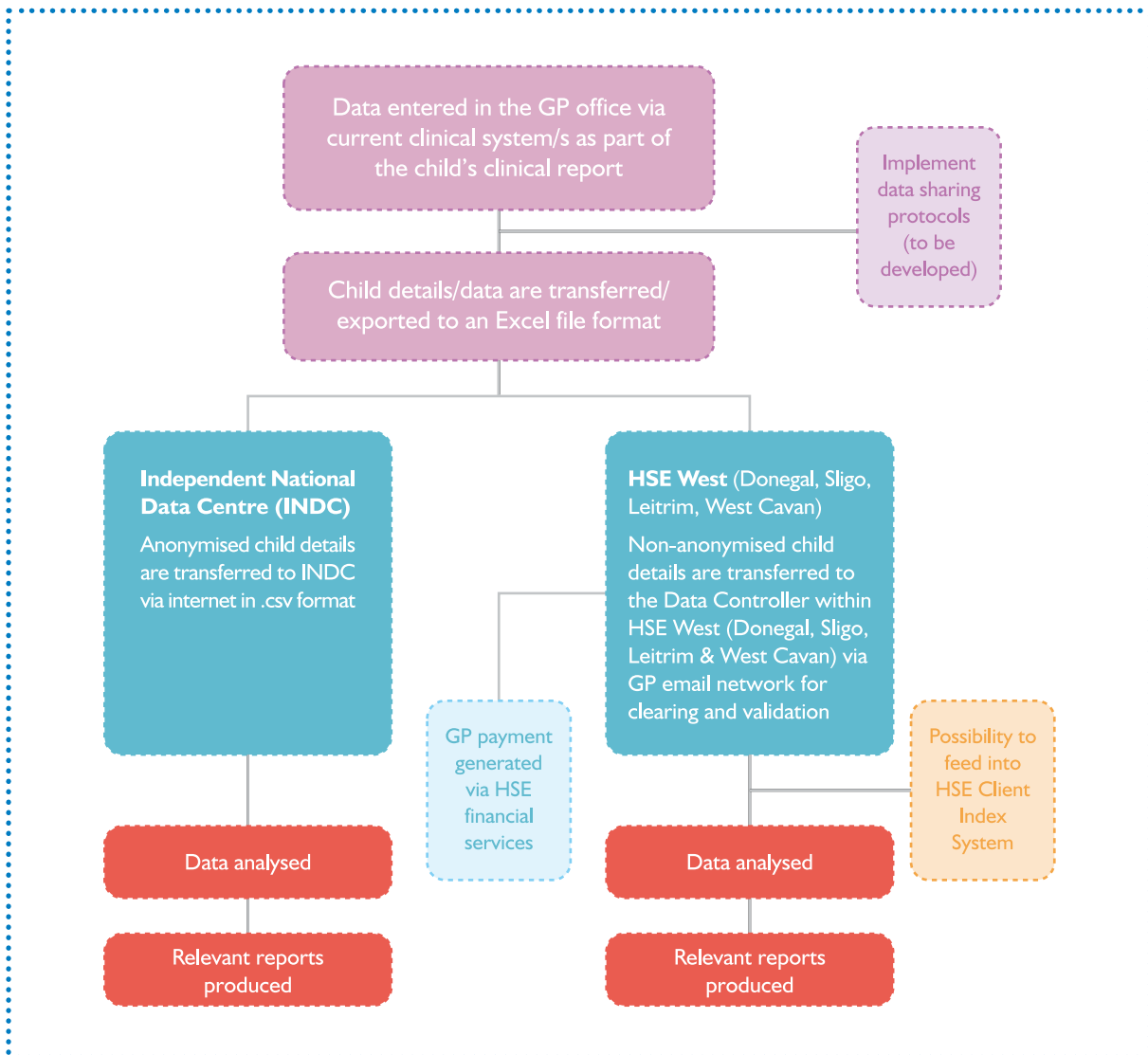
In view of training needs identified as part of the assessment of existing practice, a training module was developed and approved by the steering group, based on a manual for good practice compiled by the project officer. With support from clinicians practising in HSE West (Donegal, Sligo, Leitrim & West Cavan) hospitals, a comprehensive skills update session was delivered in early autumn 2004 (see **Appendix D**). This was approved for professional development credits by the ICGP and An Bord Altranais and supported financially by Pfizer (see **Section 6**).

Data collection and analysis

In co-operation with the two main software providers Health One Partners Ireland and Medicom, electronic data collection tools based on the agreed data set were developed for installation in practices participating in the project

(see **Section 7**). It had been agreed between HSE West (Donegal, Sligo, Leitrim & West Cavan) and the ICGP to provide for the transmission and analysis of data generated at the 6 week baby check from GP surgeries to both HSE West (Donegal, Sligo, Leitrim & West Cavan) (non-anonymised data) and the ICGP managed Independent National Data Centre (INDC) (anonymised data) (see **Appendix E** for details).

Figure 1 Outline of data flow



A client information and consent leaflet outlining the purpose of the 6 week baby check and details concerning the project was designed and received approval by the Office of the Data Protection Commissioner (see **Appendix F**).

Evaluation

After data cleaning, analysis was carried out (see **Section 8**) in September 2005. The results are reported in **Section 9**. These were presented at a stakeholder meeting in October 2005, at which feedback was sought from project participants. Formal evaluation took place through questionnaires sent to parents of children examined as part of the project during June and July 2005 (see **Appendix G**) and project GPs in September 2005 (see **Appendix H**).

4.1 Consultation with ICGP Faculty members

The project was presented to local ICGP faculty meetings in Letterkenny and Sligo in early 2004 in order to assess GPs’ views on current and future practice.

The following comments were made:

- Risk for project to focus on data collection rather than on clinical practice
- Need to incorporate financial claim for MIS scheme payment into data return process
- MIS should be renegotiated
- Avoid double entry paper/electronic records/MIS card/parent held PHR/parents’ baby books
- Project should focus on computerised practices in manageable geographical area
- Concerns about anachronistic 4 week baby check in Sligo General Hospital
- High uptake of MIS in HSE West (Donegal, Sligo, Leitrim & West Cavan)
- Suspected hidden agenda of moving child health screening and surveillance from beleaguered AMO services into general practice
- High cost of IT development if rolled out nationally
- Concerns about IT aspects in light of “HeartWatch” project experience

4.2 Consultation with Donegal Practice Nurse Association (PNA)

In early 2004 the project was presented at the Donegal branch of the PNA.

The following points were raised:

- Lack of clarity between roles of Public Health Nurse, Practice Nurse and GP in the 6 week baby check
- Importance of Public Health Nurse involvement in child health surveillance and screening
- Computerised growth centile charts should be available for inclusion in data collection software.
- Inclusion of apgar score at birth in data set as an indicator of risk

4.3 Consultation with service users

Qualitative interviews with 10 mothers, whose babies had recently attended the 6 week baby check in three HSE West (Donegal, Sligo, Leitrim & West Cavan) primary care practices, were conducted in March 2004 by Ms. Jean Kilroe, Knowledge Officer, PAC (see interview schedule and practice profiles in **Appendix I**, full report available on request). Interviews were audio-recorded, transcribed and analysed using content analysis. The objectives were:

- To explore mothers’ experience of the 6 week baby check
- To identify their suggestions for improvement
- To inform service providers of the findings

Overall, the 6 to 8 week baby check was described by mothers as a very positive experience.

Experience of the check up

“Very ordinary, comfortable, it’s nice to get the baby checked to clear up any worries that you might have. To hear somebody else telling you that she’s doing well.”

“Well I was more relaxed, more comfortable and I knew the nurses and all, as I was coming in and out during the pregnancy, so I felt relaxed with them. I knew them all on first name terms.”

“Well I would check my child for hearing... put on the radio just all of a sudden to see if they’d react and jump up. Vision, walk around the room to see if their eyes follow you. Putting my index finger into the palm of their hand to see if they’d grasp it or not. So they’re fine, that’s their motor skills.”

Asking questions

Pre-check information

“I had never been told, nobody discussed it to say what should or shouldn’t happen at it. To a certain extent, I would feel even now, I’m not really sure what should have taken place.”

“Well, if it’s something pretty serious like, I would ask the nurse or the doctor but if it’s just some small thing, I would just ask mummy first for her opinion. There is seven of us, so she must know something.”

“No problem asking questions, because I think you are in there and you do the best for your child, so you don’t mind asking.”

Content of baby check

Experiences of the check up varied from one mother’s account to another as did the level of detail of the examination and events reported.

“Basically the way I see it, it’s just a way of getting the baby weighed to see how he’s doing over the first couple of weeks. Any queries that you might have are cleared up, basically an introduction to the GP for the baby.”

Communication

Mothers were very happy with the level of communication at the check:

“Doctor was well able to listen, and I felt free to talk to her so I felt the communication was good.”

“The doctor and the nurse were more than helpful, you know I thought they were very good.”

Baby’s development in partnership

If mothers are to be viewed as partners and experts on their children’s health it is important that their views are considered. Most of the mothers responded that they were asked if they thought their baby was developing well.

Time taken to complete the check

“...there for a good half an hour, which I thought was great as it meant that everything was, they (the practitioners) took their time, did everything, checked her, they made you feel important sort of thing.”

“Oh, yeah, they take their time, they don't seem to be oh, looking at their watch and that, they take their time to complete it and they're very careful.”

Whether a mother spent seven or 30 minutes at the check did not appear to affect their perception of the quality of the service.

Advantages of the check

The most frequently mentioned advantages were having the baby checked, having questions answered and the reassurance that the check up provides:

“You see how your baby is developing, and how you are yourself after the birth and that.”

“It's nice to know how they are getting along. It makes you feel a lot better afterwards, I was very pleased with it.”

“Oh it's more reassurance, especially as a first time mother.”

“For a first time mother everything is so scary and so new, the more help they can get the better.”

Disadvantages of the check

The mothers were strong in their views that they couldn't think of any disadvantages or that there were no disadvantages:

“don't think there are any disadvantages”
“Oh, probably watching them cry when they are getting their injections “

Comments & recommendations

In light of information obtained from mothers on their satisfactory experience of the check, the following comments are made to inform future service developments.

Standardisation. The actual content of the 6 week check up must be standardised. Mothers should be better informed on the actual content of the examination. The purpose of the examination needs to be made explicit. Prior to the 6 week baby check, at the last antenatal check, a comprehensive version of the MIS leaflet should be made available to mothers.

Information. Mothers mentioned that they do receive a lot of literature during and after their pregnancy, but they do not always get time to read it. A revised MIS leaflet should include a brief outline of the content and purpose of the check, reinforced by quotes from mothers of their own experiences of the service. It would be beneficial to improve information effectiveness by giving a brief verbal outline of the service with a copy of the MIS leaflet, as mothers do listen to their service providers. Providing mothers with this information will not only inform them on what to expect, it will also empower mothers to interact and question in a way that will help their expectations to be met.

The content of the examination prior to the check should be clearly outlined to all mothers, in particular to first time mothers. The best time to inform mothers of the MIS should be agreed and standardised. With this information mothers would feel more relaxed and comfortable attending the check.

The use of the PHR as a resource on MIS content, roles of service providers and issues to be addressed at the 6 week check should be augmented.

Parent support. Mothers appear to appreciate a thorough personal check. Mothers should receive information on the content of this. Although some mothers perceive that they require a clinical examination at the 6 week postnatal check, studies have shown that there is no evidence that routine postnatal clinical checks are effective.⁶ Service providers should ensure that mothers are given due attention providing opportunities for mothers to raise issues with, and receiving support from their service providers.

“Maybe a little more towards the health of the mother herself, even if it’s only sitting down and talking to her, seeing how they are getting on, just some little thing like that. Apart from that everything was very satisfactory.”

Parents as experts. Parents are known to be experts on their children’s health.¹ It is therefore important that service providers take seriously what mothers say. Mothers should be asked if they think their baby is developing well, and be provided with an opportunity to share their views and concerns on their baby’s development. The PHR provides a selection of developmental milestones, which provides parents with knowledge on their baby’s development and empowers them to raise developmental concerns.

Health promotion. Health promotion at the check needs to be strengthened. Best practice service experiences included clinical checks, health promotion information and time to advise and answer questions.

Communication. Open communication, advice and reassurance are very important to mothers. In this study mothers were very positive about their service providers’ strong communication skills.

Best practice model. Mothers who attended at 8 weeks postnatally were mostly concerned with discussing issues regarding immunisations. Mothers who had a 6 week check had more opportunities to talk about a variety of issues, including immunisations. In order to use the potential of the 6 week check, particularly for health promotion, the administration of vaccines should be considered at separate later visits, but this needs to be balanced against parents’ willingness and availability to attend the surgery twice with their young child within a fortnight.

From a clinical perspective also, it is preferable to carry out the statutory baby check in general practice early, i.e. not after the age of 6 weeks, particularly to identify previously undiagnosed congenital cardiac disease and to assess babies for DDH with the Ortolani and Barlow manoeuvres, which become inappropriate due to decreasing soft tissue plasticity beyond the age of 6 to 8 weeks at the latest.

“What you know at 6 weeks, you have a fair amount of time to adjust to having her. You know you’ve got some kind of routine and you’d know. Any sooner, you wouldn’t have routine but yeah I think it is useful, I think it is.”

Duration of appointment. All mothers need to be given enough time to complete the examination and have time to chat, question and receive information without feeling rushed.

The approximate time a standardised check should take needs to be established. The actual time mothers spent at the check up wasn't the issue reported, mothers were more interested in their perceived satisfaction with the service regardless of whether this took seven or 30 minutes to complete.

Other. Mothers expressed a preference for the doctor instead of a nurse to administer vaccinations. This indicates that the concept of multidisciplinary care needs to be made more explicit. Mothers do however have a high level of awareness that issues can be addressed by a range of service providers e.g. Practice Nurse and Public Health Nurse.

Key recommendations

- Standardise 6 week baby check in light of available evidence
- Revise MIS leaflet
- Parents need to be better informed about MIS
- Clearly outline purpose and content of 6 week baby check
- Health promotion needs to be strengthened
- Recommended appointment time 20-30 minutes
- Introduction of parent held PHR to aid communication and facilitate information to parents
- Separate provision of 6 week baby check and primary immunisations

4.4 Consultation with GPs recruited to participate in project

This is a brief summary of 6 week baby check related practice amongst GPs and Practice Nurses before project was implemented in their practices (see **Appendix B** for questionnaire). Fourteen out of 15 GPs responded.

Uptake rate

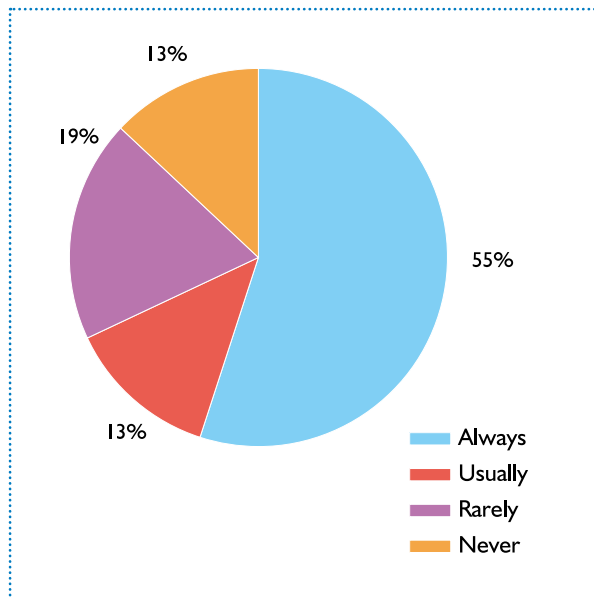
- Four GPs from four practices measured uptake rates for 6 week baby check in their practice population by manually checking practice registers. Uptake rates ranged from 90-100%. Three GPs did not provide this information. The remainder of GPs (7) did not calculate, but estimated their uptake rate at 90-100%.

In light of variable and less than comprehensive patient registration mechanisms in Irish general practice, exact determination of practice population, as well as parents with babies eligible for the 6 week baby check is problematic; determination of a denominator for practices to calculate uptake rates is difficult and likely to be inaccurate. Improvements will be achieved with nationwide introduction of the parent held PHR, which will create an electronic child health record for children at HSE level.

Current practice

- 50% of project GPs (7) carried out 6 week baby checks with babies aged approximately 6 weeks, and the remainder carried it out at 8 weeks, usually combined with immunisations.
- Nearly 75% of GPs (9) always (2) or usually (7) checked mother and baby during the same appointment, while the remainder rarely (3) or never (2) did so.

Figure 2 *Number of GPs combining 6 week baby check with postnatal check of mother*



- Of the 75% of GPs that recorded data electronically, none sought consent.
- 50% of GPs (7) usually discussed the purpose and content of the examination with parents prior to or during the 6 week baby check.
- Only 2 GPs used the 'white card' intended for return of activity and outcome data on the 6 week baby check as a record.

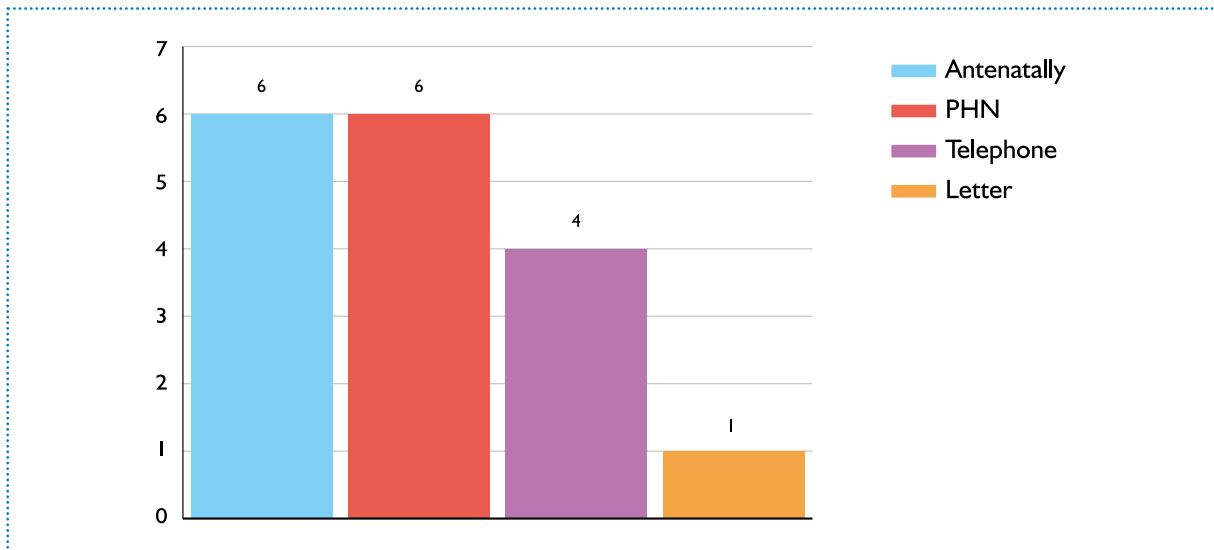
This card is in urgent need of modernisation and replacement with a more appropriate recording system (one of the objectives of this project), but currently is the only agreed mechanism for GPs to seek payment for MIS services. Three GPs used paper based records for the 6 week baby check, and the remainder 11 entered data electronically. One GP also entered details into the now obsolete child health booklet previously produced by the DoHC's Health Promotion Unit.

- 50% of GPs (7) had a protocol for the 6 week baby check.
- All babies were seen during routine surgery
- Length of time for 6 week baby check varied between 10 and 30 minutes.
- 40% (6) of GPs carried out 6 week baby check without involving a Practice Nurse. The remainder of GPs delivered the check in co-operation with their Practice Nurse.

Communication between parents and professionals

- Already prior to the project, practices actively sought to invite parents and their babies for the 6 week baby check. This was done by verbal invitation antenatally (6), through the Public Health Nurse (6), by telephone (4) and letter of invitation (1) – several practices employed more than one method.

Figure 3 *Methods employed by primary care providers to invite mothers to attend with their babies for 6 week baby check*



- Most GPs (12) felt there was adequate time for parents to ask questions during the 6 week baby check and took this opportunity to discuss wider health promotion topics like immunisations, feeding, sleeping and concerns the mother might have, including contraceptive advice.

General information

- All 14 GPs expressed dissatisfaction with the feedback they received from HSE regarding routinely collected data submitted for purposes of payment generation and monitoring of service provision.
- On the other hand, 80% (11) GPs expressed satisfaction with the amount of feedback they received from providers of secondary child health services following referral of children as a result of the 6 week baby check; 20% (3) were neutral in their judgement.

Previous training

- All GPs had undertaken child health training in an approved paediatric training post.

Suggestions from GPs for the improvement of the 6 week baby check

- Standardisation of the format for the 6 week baby check
- Development of electronic data collection tools that reflect an evidence based standard for the 6 week baby check
- Strengthened links to Public Health Nurses
- Improved access to secondary referral services

5.1 Application process

After a period of consultation with the ICGP and agreement by the steering group, a framework for recruitment of GPs and Practice Nurses from HSE West (Donegal, Sligo, Leitrim & West Cavan) was developed.

In May 2004 a letter of invitation, background information regarding the project and an application form was sent to GPs in HSE West (Donegal, Sligo, Leitrim & West Cavan) (**Appendix C**). The list was compiled from ICGP and HSE West (Donegal, Sligo, Leitrim & West Cavan) Primary Care Development Unit databases to ensure full coverage. Unfortunately, despite these efforts, a small number of GPs were not contacted. Overall, 153 GPs were invited and 55 applied (36%), many on behalf of practices with more than one principal.

Some of those who applied did not meet the entry criteria as outlined in the letter of invitation to apply:

- Computerisation of practice
- Practice access to HSE West (Donegal, Sligo, Leitrim & West Cavan) electronic network for primary care

The latter was an essential requisite for secure data transfer. Preference was given to GPs from practices employing one of the two predominant GP IT software support system providers in the North West (Health One Partners Ireland and Medicom), as it was beyond the scope of the project to work with a larger number of providers or users of custom made systems. Fifteen applicants from nine practices were selected in accordance with the selection criteria reflected in the application form and in consultation with the steering group. A maximum of three GPs from any practice, regardless of the number of partners in the practice, was recruited to the project, while practices were encouraged to enter all babies seen in the practice for a 6 week baby check for the duration of the project.

Table 2 GP practice profile

Practice	Number of GPs in Practice	Practice Nurse Yes / No	Practice Population	GMS / Non GMS ratio	IT System	Location
Health Centre Rathmullan Co. Donegal	2 GPs	Yes	Not available	Not available	HealthOne	Rural
Health Centre Lifford Co. Donegal	4 GPs 1 Assistant	Yes	12100	30/70	Medicom	Semi urban
Millbrae Surgery Stranorlar Co. Donegal	5 GPs	Yes	Not available	60/40	Medicom	Semi urban
Bayview Practice Ballyshannon /Bundoran Co. Donegal	6 GPs 1 Assistant	Yes	12800	40/60	HealthOne	Semi urban
Health Centre Carrigart Co. Donegal	1 GP 1 Assistant	Yes	2000	75/25	HealthOne	Rural
Health Centre Skreen Co. Sligo	1 GP Shared Assistant	Yes	1472	25/75	HealthOne	Rural
Medical Practice Riverstown Co. Sligo	1 GP Shared Assistant	Yes	1800	33/67	HealthOne	Rural
Health Centre Cloghan Co. Donegal	1 GP	Yes	1070	50/50	HealthOne	Rural
Health Centre Drumshambo Co. Leitrim	1 GP	Yes	Not available	Not available	Medicom	Rural

Practice Locations



5.2 Contractual arrangements

GPs selected to participate in the project were issued with a contract (**Appendix J**) to be signed and returned together with the pre project implementation questionnaire (see **Section 4.4** and **Appendix B**) and the invitation for them and their Practice Nursing staff to attend a mandatory skills refresher course (see **Section 6**).

An initial payment of €400 was made to each recruited GP after participation in a mandatory skills refresher course, and without prejudice to any future contract negotiations, a payment of €40 was made for each completed 6 week baby check on which data were received by the project officer, in addition to the 6 week baby check MIS fee of €29.74. At project GPs' request, agreement was reached within HSE West (Donegal, Sligo, Leitrim and West Cavan) between project GPs and administrative staff to include project related payments in regular MIS payment cheques received by GPs on a monthly basis. The ICGP was not involved in this process.

6.1 Skills refresher course

The half-day course was held on two occasions during September and October 2004 to accommodate all project participants. All 15 GPs and nine Practice Nurses attended. The course attracted ICGP CME approval and post registration category 1 approval from An Bord Altranais. Participants received travel expenses and sessional payment for their attendance.

6.2 Guide to good practice

The course content was developed by the project officer to reflect the revised and extended clinical standard for the examination of infants at the 6 week baby check and topics identified by GPs during the consultation phase of the project prior to implementation. This included health promotion topics and communication with parents. An overview of data management processes was also covered. The delivery of the course was facilitated by the project officer, the project manager and clinical colleagues from secondary child health services (see **Appendix K**), who were requested to focus their presentations and practical sessions on the content of the 'Guide to good practice' manual developed by the project officer (available on request as separate document).

6.3 Evaluation of skills refresher course

- Most participants described the course as *"informative"*, *"educational"* and *"interesting"*.
- 80% of attendees rated the course as either *"very good"* or *"excellent"*.
- Areas found most useful were:
 - ophthalmic examination
 - hip examination
 - growth monitoring
 - referral protocols
 - sudden unexpected death in infants (SUDI)
 - communication with parents
- Areas found least useful where:
 - data management processes
 - radiological examination of hips in DDH
- Some participants would have liked to see a demonstration of the IT programme and its use.
- Some participants were interested in further information regarding immunisation schedules and advice to parents.

7.1 IT software development

Based on the revised and extended content of the proposed new model for the 6 week baby check in general practice, a data set was agreed in discussion with HSE West (Donegal, Sligo, Leitrim & West Cavan), ICGP and software vendors.

Following sign off by the steering group, Dr. Brian Meade, chairperson of the ICGP health informatics group, compiled a software requirements specification draft document in July 2004 (available on request as a separate document), which was amended several times during the software development process undertaken by the main IT providers in HSE West (Donegal, Sligo, Leitrim & West Cavan), Health One and Medicom.

- Health One version was tested by project officer and Dr. Brian Meade, ICGP October – December 2004
- Medicom version was tested by Dr. Ciaran Kelly, Health Centre, Lifford October 2004

Figure 4 Screenshot from Health One software programme (demographic details)

The screenshot shows a web-based form titled "Child development project" with the "nw hb INDC" logo. The form has a tabbed interface with the following tabs: Demographics, Health professionals, Birth history, Obstetric history, Birth details, Infant details, Mother information, and Examination details. The "Demographics" tab is active and contains the following fields:

- First name
- Surname
- Phone
- Address 1
- Address 2
- Address 3
- Address 4
- County of residence
- DOB
- Gender
- Patient ID [composite number]
- PPS

Figure 5 Screenshot from Health One software programme (health promotion)

The screenshot shows the same "Child development project" form, but with the "Health promotion" tab selected. The "Demographics" tab is still visible at the top. The "Health promotion" tab contains the following fields:

- Exam date
- Age in days
- General
- Growth
- Eyes
- Hearing
- Cardiovascular
- Testes
- Hips
- Infant feeding
- Health promotion
- Comments / additional information
- Sudden infant death syndrome
- Recognising illness
- Immunisation
- Accidents
- Nutrition

Figure 6 Screenshot from Health One software programme (eye examination)

The screenshot shows a web-based form titled "Child development project" with the "nw hb INDC" logo. The form has a navigation bar with tabs: Demographics, Health professionals, Birth history, Obstetric history, Birth details, Infant details, Mother information, and Examination details. The "Examination details" tab is active. Below the navigation bar, there are input fields for "Exam date" and "Age in days". A secondary navigation bar includes tabs: General, Growth, Eyes, Hearing, Cardiovascular, Testes, Hips, Infant feeding, Health promotion, and Comments / additional information. The "Eyes" tab is selected. The form contains several dropdown menus: "Appearance", "Fix and follow ability", "Red reflex", "Outcome", and "Referral to".

Figure 7 Screenshot from Health One software programme (infant feeding)

The screenshot shows the same "Child development project" form, but with the "Infant feeding" tab selected in the secondary navigation bar. The "Exam date" and "Age in days" fields are present. The "Infant feeding" section includes dropdown menus for "Current feeding method" and "Infant ever breast fed", and input fields for "Duration of breast feeding in weeks" and "Duration of breast feeding in additional days".

Figure 8 Screenshot from Medicom software programme (demographic details and birth history)

The screenshot shows a software window titled "Dynamic GP - [GP Child Development Project v1.1]". The main title is "GP Child Development Project". The window contains a form with the following sections:

- Patient Demographic Details:** Fields for First Name (Testy), Surname (Test), Address 1 (test rd), Address 2 (test town), Address 3 (test town), Address 4 (test postcode), County, Telephone, Date of Birth (01/01/06), Gender (Female), and P.P.S.N.
- Client ID:** 0101065229
- Birth History:** Fields for Place of Birth, Hospital of Birth, Has infant a previously known diagnosis?, Previously known diagnosis (None), and Hospital admission since birth?
- Feeding Information:** Fields for Current feeding method, Ever breast fed?, Age when stopped breastfeeding in weeks, and Duration of breast feeding in additional days.

Navigation tabs at the bottom include: Exam Details, General, Growth, Motor Development, Eye, Hearing, Cardiovascular, Testes, Hips, Infant Feeding, Health, and Comments. A "CLOSE" button is located at the bottom right.

Figure 9 Screenshot from Medicom software programme (demographic details, birth history and eye examination)

This screenshot is similar to Figure 8 but includes the "Eye" examination section. The "Eye" tab is selected in the navigation bar. The "Eye" section contains the following fields:

- Eyes appearance
- Red reflex
- Outcome of eye examination
- Fix and follow ability
- Eyes referral where? (Not referred)

The "CLOSE" button is visible at the bottom right of the form.

Figure 10 Screenshot from Medicom software programme (demographic details, health professional details and comments)

The screenshot shows the 'GP Child Development Project' software interface. The window title is 'Dynamic GP - [GP Child Development Project v1.1]'. The main menu includes 'DYNAMIC - PATIENT RECORD TRACKING SYSTEM' and various options like 'Select All', 'Search By Name', 'New Record', 'Family Search', 'View All', 'Professionals', 'Image Scan', 'Labels', 'Labels Printer', 'Set', and 'Messages'. The patient's name is 'Testy' and the client ID is '0101065229'. The 'Patient Demographic Details' section includes fields for First Name, Surname, Address 1-4, County, Telephone, Date of Birth (01/01/06), Gender (Female), and P.P.S.N. The 'Health Professionals' section includes 'GP GMS Number' and 'Did public health health nurse visit infant?'. There are also fields for 'Public Health Nurse' and 'Comments'. A 'CLOSE' button is visible at the bottom right.

Figure 11 Screenshot from Medicom software programme (demographic details, birth history and cardiovascular examination)

The screenshot shows the 'GP Child Development Project' software interface, similar to Figure 10. The patient's name is 'Testy' and the client ID is '0101065229'. The 'Patient Demographic Details' section is the same. The 'Birth History' section includes 'Place of Birth', 'Hospital of Birth', 'Has infant a previously known diagnosis?', 'Previously known diagnosis' (set to 'None'), and 'Hospital admission since birth?'. The 'Cardiovascular' section includes 'Heart sounds', 'Femoral pulses', 'Cardiovascular exam outcome', and 'CVS referral where?' (set to 'Not referred'). A 'CLOSE' button is visible at the bottom right.

7.2 Software installation

Medicom installed the programme in three practices (Lifford, Drumshambo and Stranorlar). The remaining practices using Health One were sent a disc for self-installation. First monthly returns were received in November 2004 and all practices were operational by February 2005.

7.3 Modification to dataset

IT management services HSE West (Donegal, Sligo, Leitrim & West Cavan) supported the development of a programme to import data files received from, and generate payments to, GPs. This process and feedback from GPs and Practice Nurses directly to the project officer raised inconsistencies between software requirements specification and software programmes.

Software was amended accordingly and updated versions installed in Medicom practices, while Health One posted out updated CD version to their users.

7.4 Consent and data protection

In order to ensure compliance with existing data protection legislation, a data privacy policy (**Appendix K**) and an information leaflet for service users also fulfilling informed consent criteria (**Appendix F**) were developed with support from the ICGP and the Freedom of Information Officer Mr. Ken Lillis of HSE West (Donegal, Sligo, Leitrim & West Cavan). Approval was received from the Office of the Data Protection Commissioner in August 2004.

7.5 Problems with software installation, updates, and file exports

Some practices had difficulty using the secure primary care e-mail network and server **nwdoc.ie**. This delayed returns in two practices by several months and never became fully operational in another practice for the duration of the project.

Initial installation of data collection software was delayed in some practices due to perceived insufficient user support.

Both software programmes allowed exporting of empty files, contrary to requirements laid out in the software requirement specification.

The systems had not been designed to provide an export history for GPs to keep track of their returns.

The planned development of an interface for data cleaning did not progress sufficiently at HSE West (Donegal, Sligo, Leitrim & West Cavan) level for validation checks to be carried out electronically, which resulted in difficulties with generating payments and data cleaning.

7.6 ICGP Independent National Data Centre website

The Independent National Data Centre (INDC) managing the national 'HeartWatch' programme run by ICGP received funding from the GPIT interest group at DoHC to develop a website for the collection of anonymised child health data.

There were delays in completion of the website, which did not become operational until June 2005. GPs were then provided with passwords to access the INDC website for data transfer in the same manner as for 'HeartWatch'.

GPs had been generating data files on children examined as part of the project for export and analysis both by HSE West (Donegal, Sligo, Leitrim & West Cavan) and the INDC since the autumn of 2004 and had been receiving payment on receipt of files by HSE West (Donegal, Sligo, Leitrim & West Cavan). There was therefore no financial incentive for GPs to send data to INDC.

From January to June 2005 some practices had sent their INDC files to the project officer, who forwarded them to INDC subsequently. Other practices were requested to send all their INDC files to the INDC website when it became operational. INDC received 118 out of 284 files for analysis.

An interface had been developed to allow tracking, validation and real time analysis of data received by INDC.

- System administrator monitoring receiving and analysing data
- Electronic real time production of reports
- Export history for individual GPs of files sent, accepted and rejected for incomplete or inaccurate data

Figure 12 Screenshot of administrative section of INDC website interface

INDC Child Health Surveillance

Admin - Submitted Forms Status

PatientID	GP ID	Date Submitted	Accepted
F201104123539_0	23539	6/17/2005 7:01:34PI	No
M051104123539_0	23539	6/17/2005 7:01:34PI	No
F080105179689_0	79689	6/24/2005 2:57:14PI	No
F201204185464_0	85464	6/24/2005 2:57:14PI	Yes
F161104179689_0	79689	6/24/2005 3:01:05PI	Yes
M091204179689_0	79689	6/24/2005 3:01:05PI	Yes
M171204179689_0	79689	6/24/2005 3:01:05PI	Yes
M181104179689_0	79689	6/24/2005 3:01:05PI	Yes
F101104179944_0	79944	6/24/2005 3:01:05PI	Yes
F251104179944_0	79944	6/24/2005 3:01:05PI	Yes
F020205179689_0	79689	6/24/2005 3:03:22PI	Yes
M130105179689_0	79689	6/24/2005 3:03:22PI	Yes
F020205185251_0	85251	6/24/2005 3:03:23PI	Yes
F110205185251_0	85251	6/24/2005 3:03:23PI	No
M180105185251_0	85251	6/24/2005 3:03:23PI	Yes
F140405185332_0	85332	7/12/2005 12:07:00A	Yes
M210405185332_0	85332	7/12/2005 12:07:01A	Yes
F210305175032_0	75032	7/12/2005 12:13:30A	No
F060205185332_0	85332	7/12/2005 12:13:30A	Yes
M040305185332_0	85332	7/12/2005 12:13:30A	Yes
M171104185332_0	85332	7/12/2005 12:13:30A	Yes
F211204175023_0	75023	7/12/2005 12:23:01A	Yes
F060105175163_0	75163	7/12/2005 6:23:41PI	Yes
F191204175163_0	75163	7/12/2005 6:23:41PI	Yes

Figure 13 Screenshot of reports section of INDC website interface (1)

INDC Child Health Surveillance

Admin - Tobacco Smoke Exposure

Number of patients in the program:	118	
Number of patients exposed to tobacco smoke in the home:	26	22.0 %

8.1 HSE West (Donegal, Sligo, Leitrim & West Cavan

Data files received in Excel format were amalgamated and cleaned. From this, they were imported into Microsoft Access format for analysis (see **Section 9**).

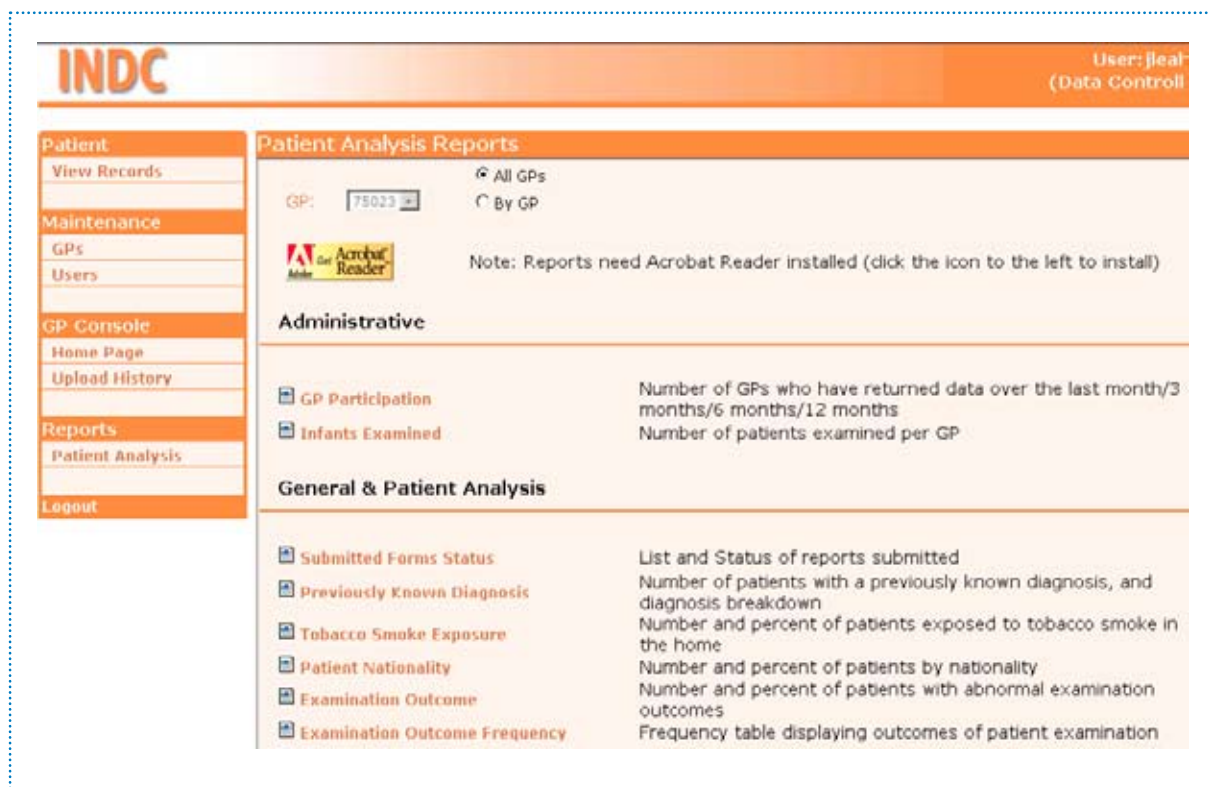
8.2 ICGP Independent National Data Centre

Data recorded by GPs and Practice Nurses were submitted into an online database where records.

Files are generated at practice level and uploaded after log on to the INDC website, using the file upload page within the application page of the site. Files are processed by the windows service that transforms and validates the data, reports on the validation status and finally imports the data into database tables for storage.

The system has a management module that allows administrators of the system to add in practices, GPs and other users. There is a GP console, which enables GPs to query information on their use of the system with a full audit trail on files imported, accepted and rejected. There is also a section which provides a menu of online patient analysis reports.

Figure 15 Screenshot of INDC patient analysis reports section



From November 2004 through to August 2005 a total of 284 babies were examined as part of this project.

Figure 16 Number of babies seen per practice

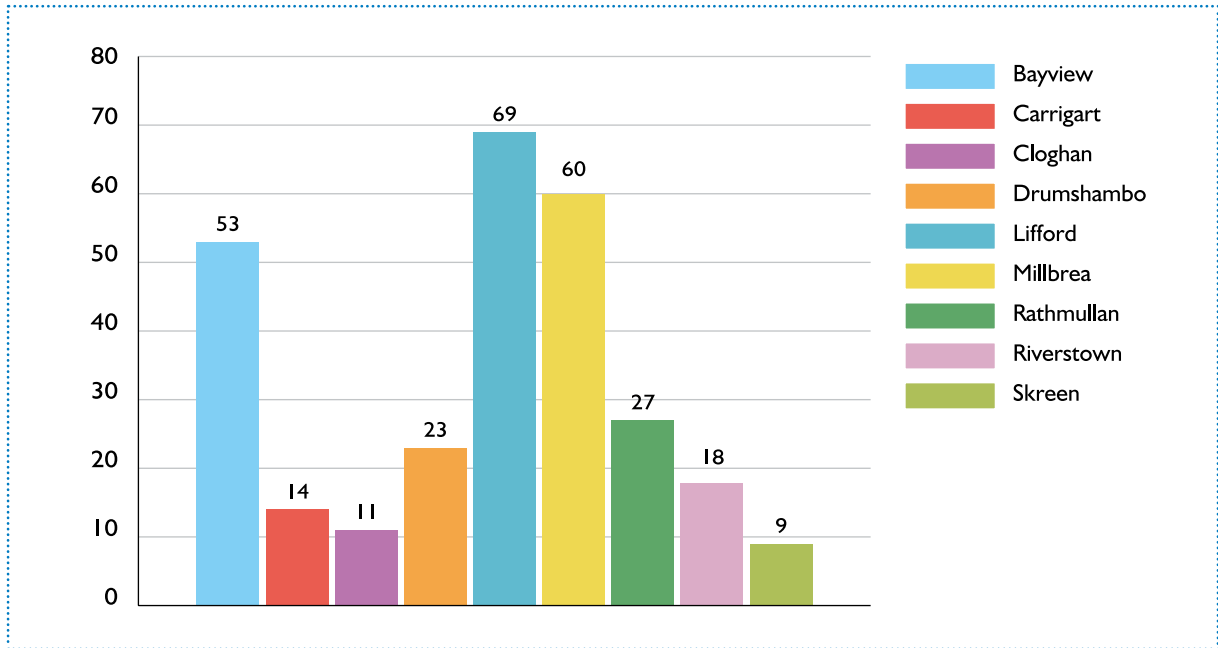


Figure 17 Gender distribution of babies

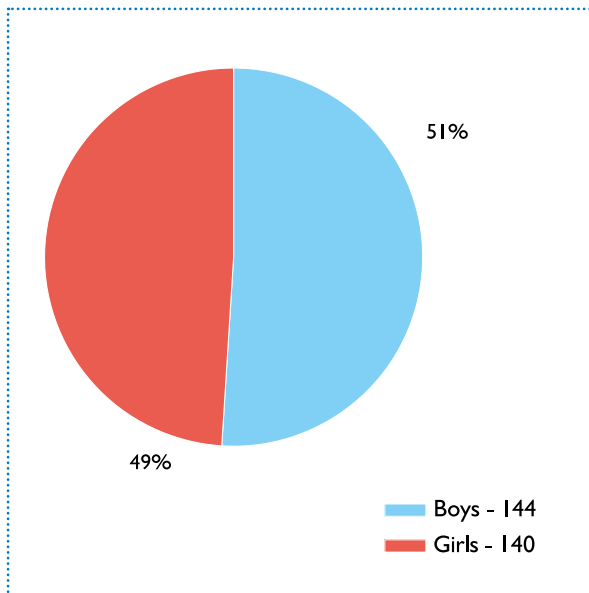
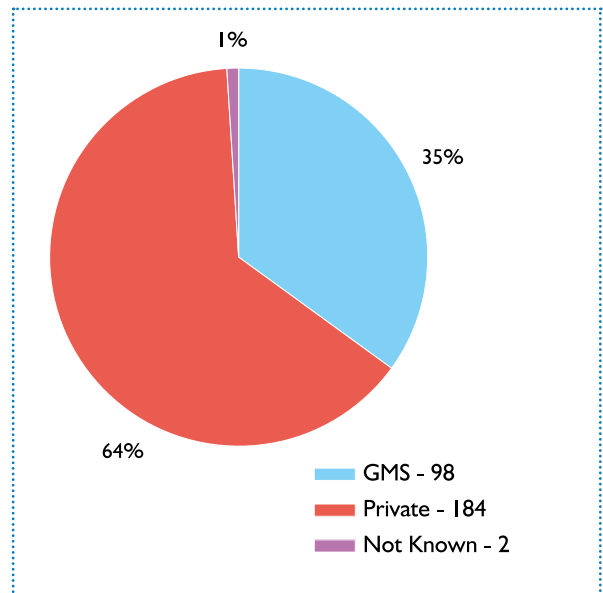
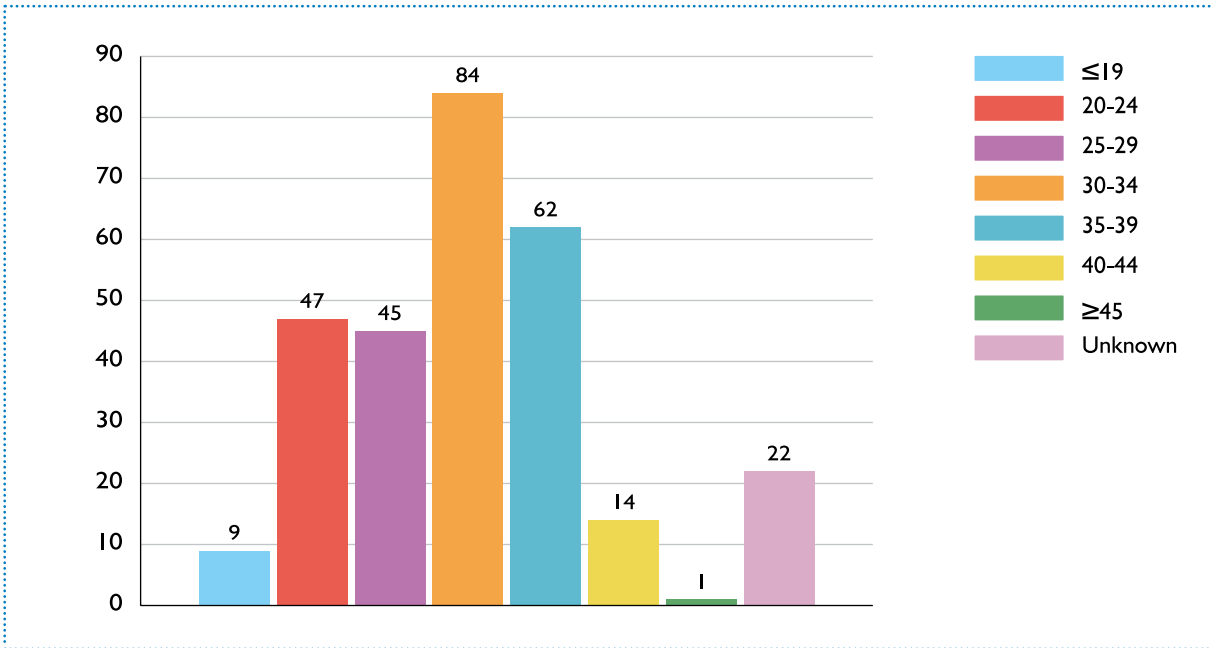


Figure 18 GMS status of mother



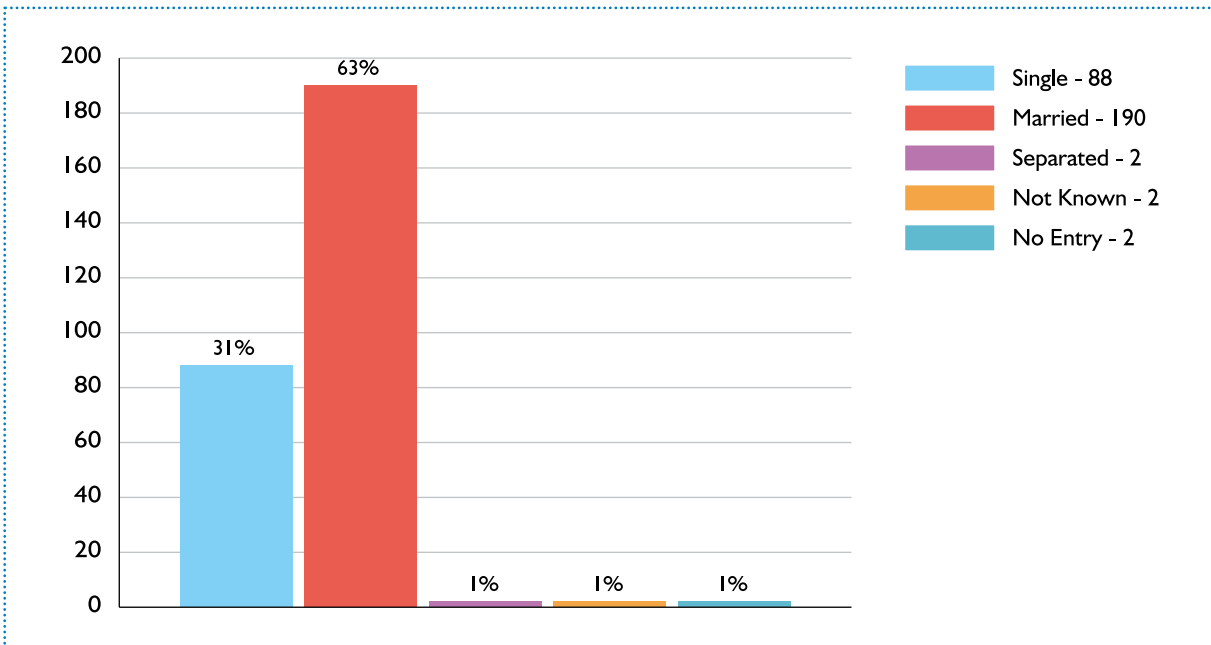
According to HSE National Shared Services Primary Care Reimbursement Services, 44.73% (Donegal 50.09%, Leitrim 41.26%, Sligo 33.67%) of the population in HSE West (Donegal, Sligo, Leitrim & West Cavan) were medical card holders in 2005. An estimate of GMS/ non GMS ratios amongst project practices indicates a wide variation, ranging from 25% to 75% of patients registered with practices holding a medical card. Figures shown here are likely to reflect a relatively high level of economic activity amongst the reproductively active population section.

Figure 19 Number of mothers in five year age bands at birth of baby



At birth of their baby, 10% of mothers were younger than 20 years (5%). 16% each came from age groups 20-24 years (14.4%) and 25-29 years (25%). 30% of mothers were aged 30-34 years (32%), 22% came from age group 35-39 years (19%), 5% were aged 40-44 years (no data). (Comparative figures for births statistics from 2003 are given in brackets).²⁰

Figure 20 Marital status of mother



Two thirds of mothers (66%) were married at the time of bringing their baby for the 6 week baby check. Almost one third (31%) were single. This compares with 71% and 28% respectively reported in 2003.²⁰

Figure 21 Percentage of first time mothers

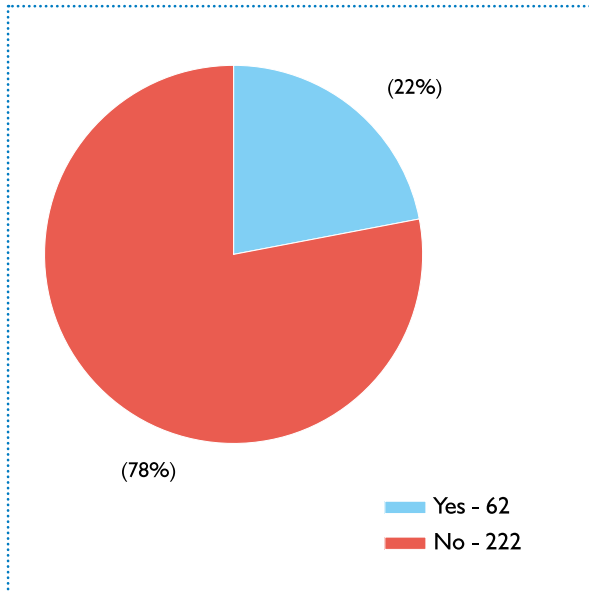
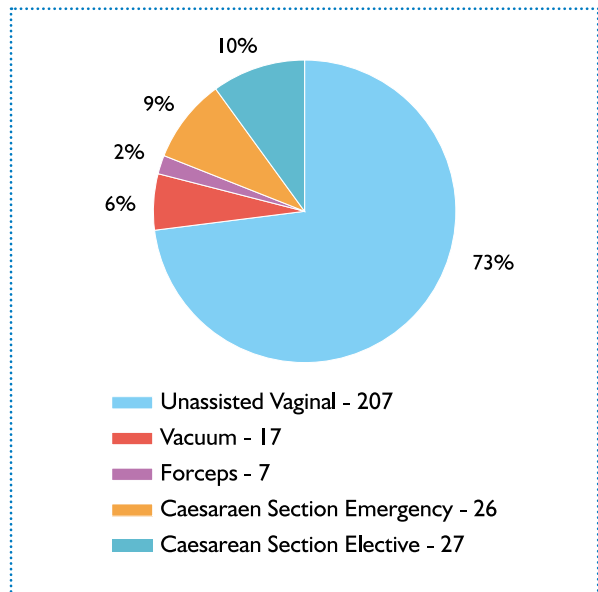


Figure 22 Type of delivery of baby



73% of babies were born by normal vaginal delivery. There was an overall caesarean section rate of 19%.

Figure 23 Admission of baby to special care baby unit for any reason

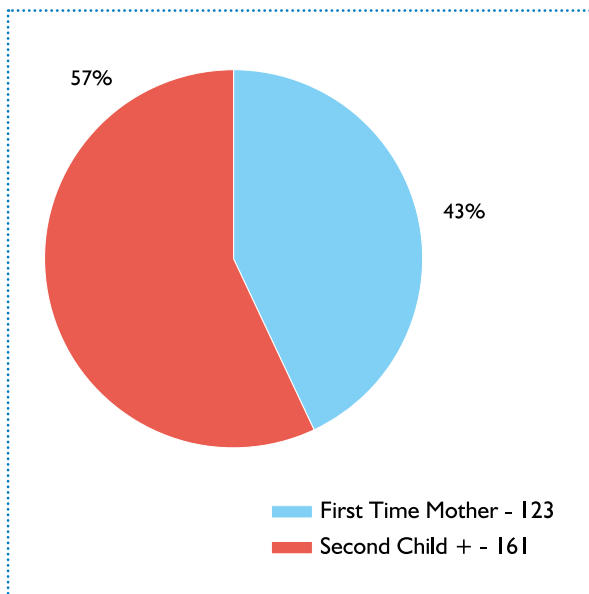
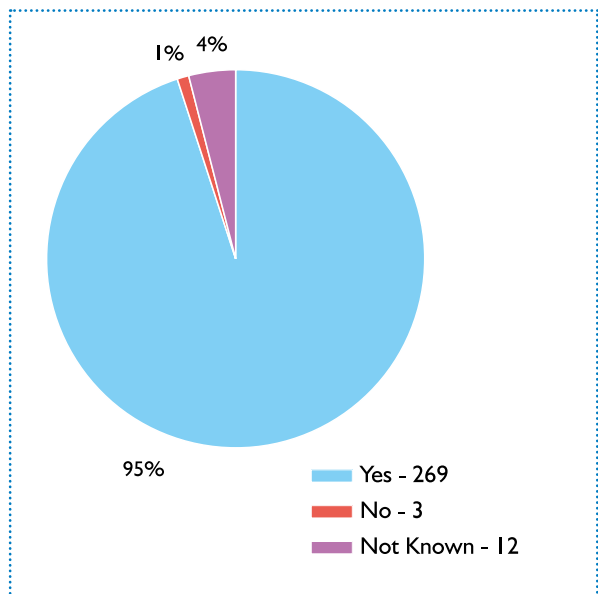


Figure 24 Number (%) of babies having received a visit from the Public Health Nurse



In accordance with the statutory national core child health programme,³ all newborn babies and their mothers should receive a visit from their Public Health Nurse within 48 hours of discharge from maternity care, usually provided in hospitals. 95% of mothers reported having received such a visit, which compares favourably with figures from other parts of ROI and is in line with figures reported for HSE West (Donegal, Sligo, Leitrim & West Cavan) as part of the national Child and Adolescent Health Performance data set.²¹

Figure 25 Admission of baby to hospital following discharge after birth

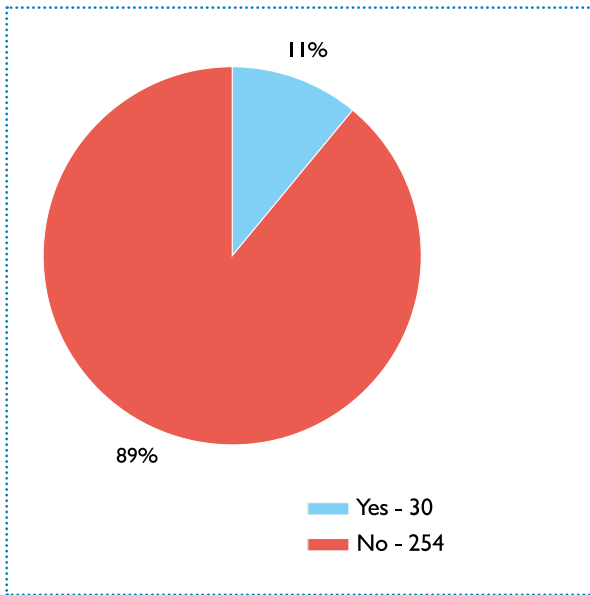


Figure 26 Number (%) of babies seen for 6 week baby check who had a previously known diagnosis

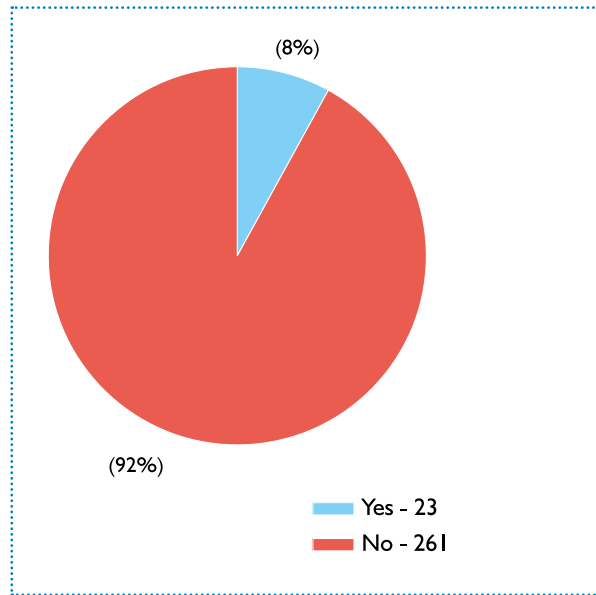


Figure 27 Type of feeding when attending for 6 week baby check

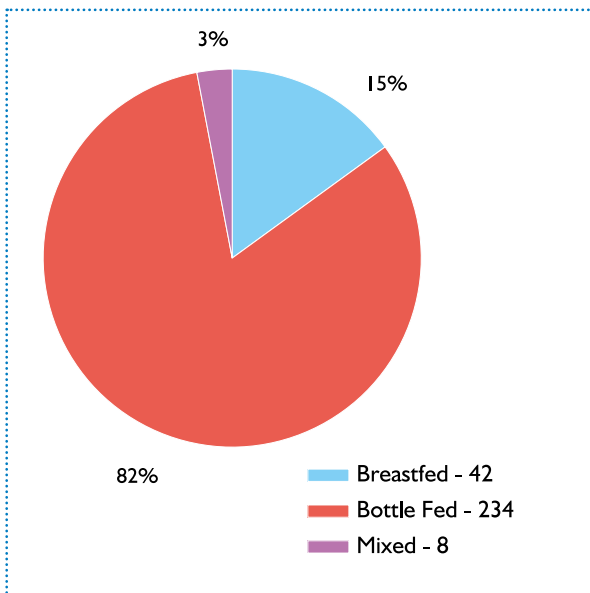
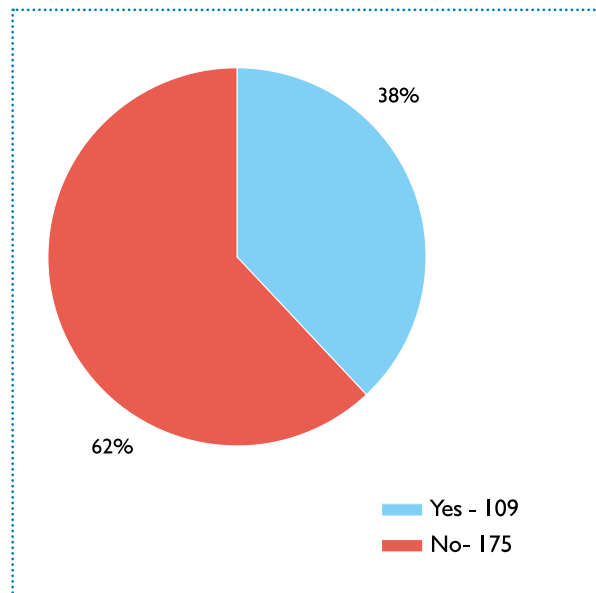


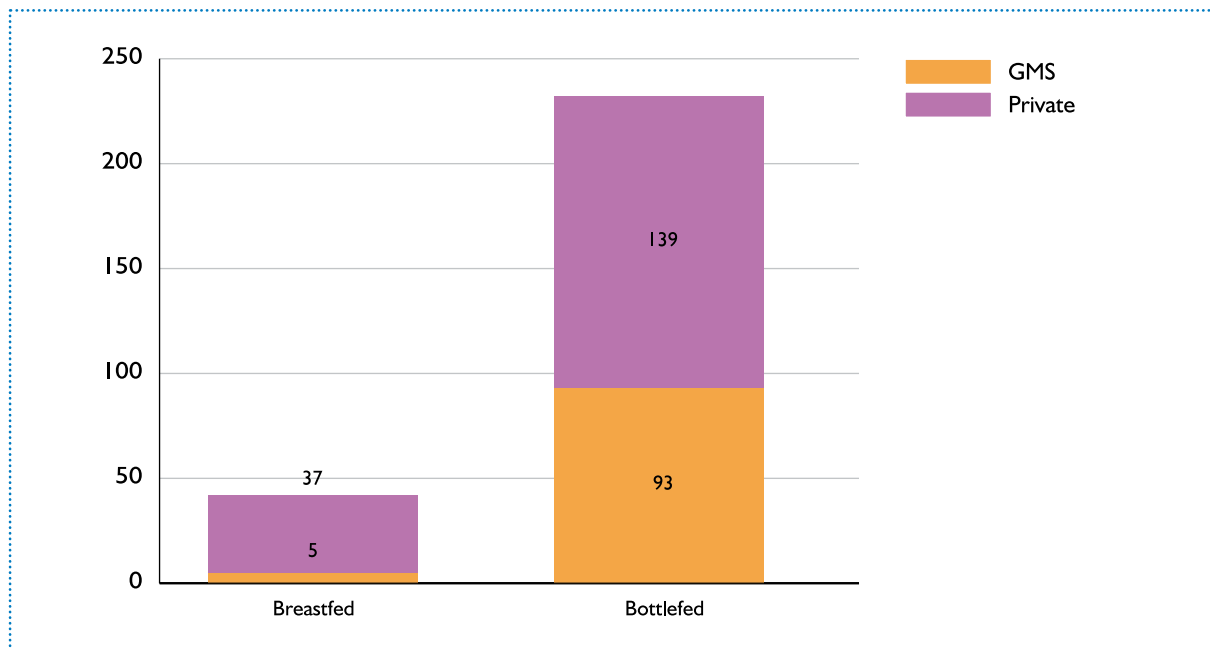
Figure 28 Number (%) of babies ever breastfed



A breast feeding rate of 15% and an additional 3% of babies being fed with a combination of breast and bottle milk was observed.

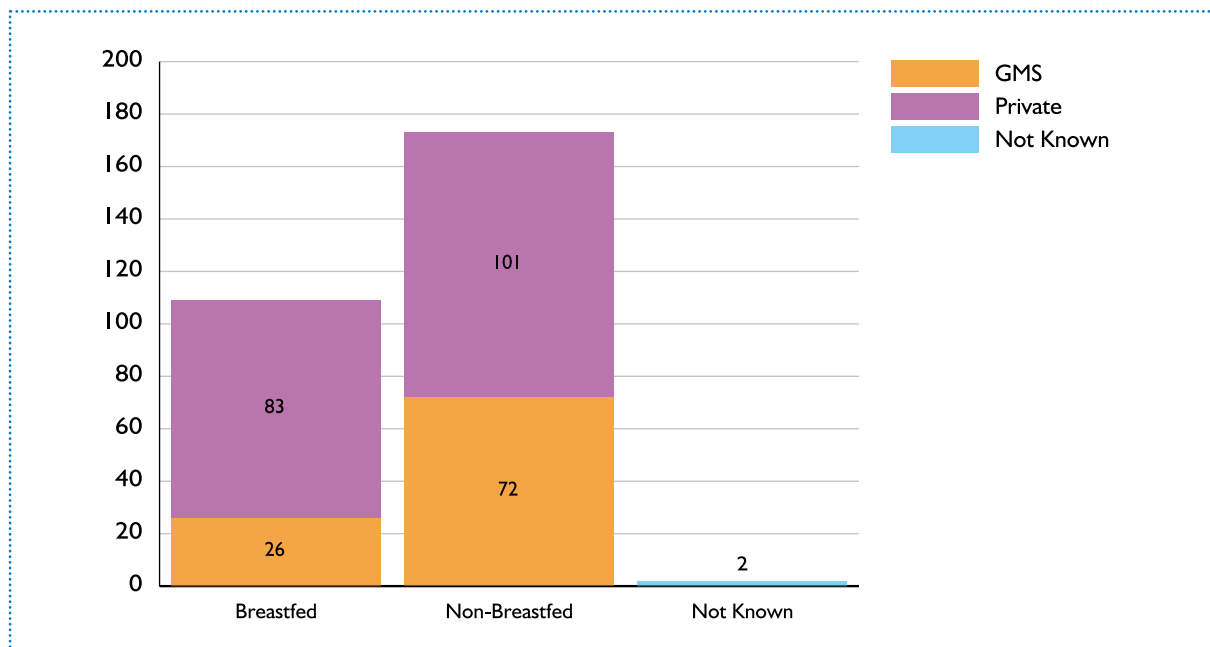
The rate of 38% for babies ever having been breastfed is in keeping with regional and national data.

Figure 29 Number of babies breastfed and bottlefed according to GMS status of mother at 6 week baby check



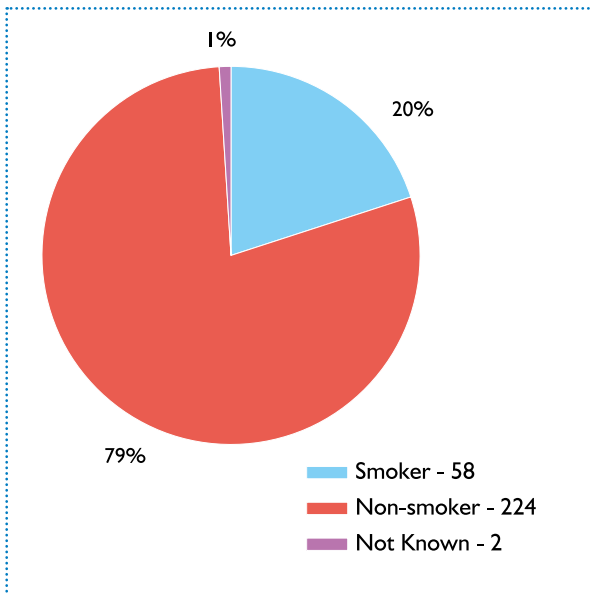
When analysed separately by GMS status, the rate of breastfeeding amongst medical card holders at the 6 week baby check was 5%, compared to 21% for non medical card holders.

Figure 30 Number of babies ever breastfed by GMS status



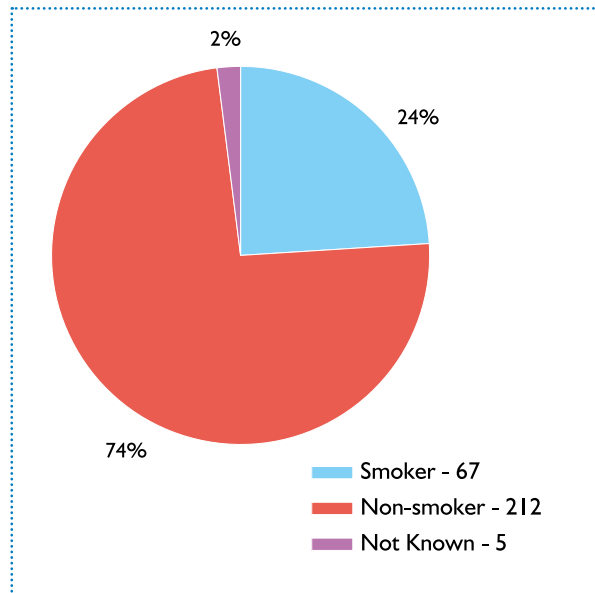
26.5% of babies of mothers holding a medical card had ever been breastfed, compared to 45% of babies born to mothers without a medical card.

Figure 31 Number (%) of mothers smoking during pregnancy



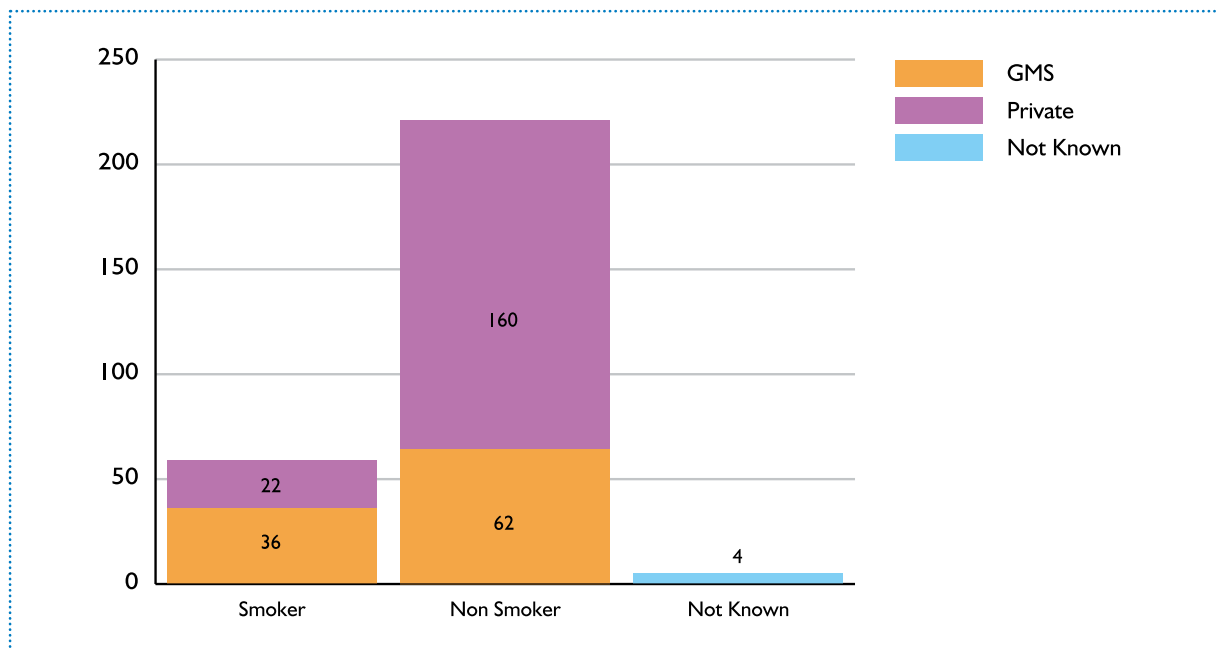
20% of mothers presenting their baby for the 6 week baby check stated that they had smoked during pregnancy.

Figure 32 Exposure of baby to environmental tobacco smoke (ETS)



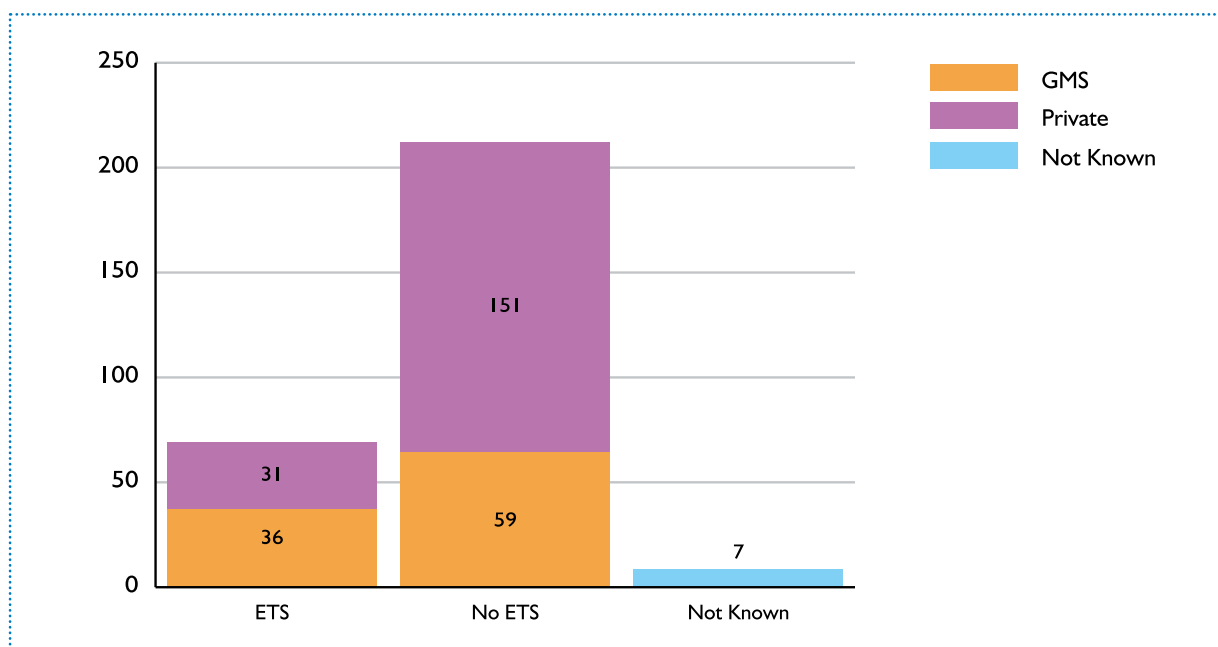
24% of mothers stated at the 6 week baby check that their baby was exposed to environmental tobacco smoke (ETS) in the home.

Figure 33 Maternal smoking during pregnancy by GMS status



37% of mothers with a medical card had smoked during pregnancy, compared to 12% of mothers without a medical card.

Figure 34 Exposure of baby to environmental tobacco smoke by GMS status



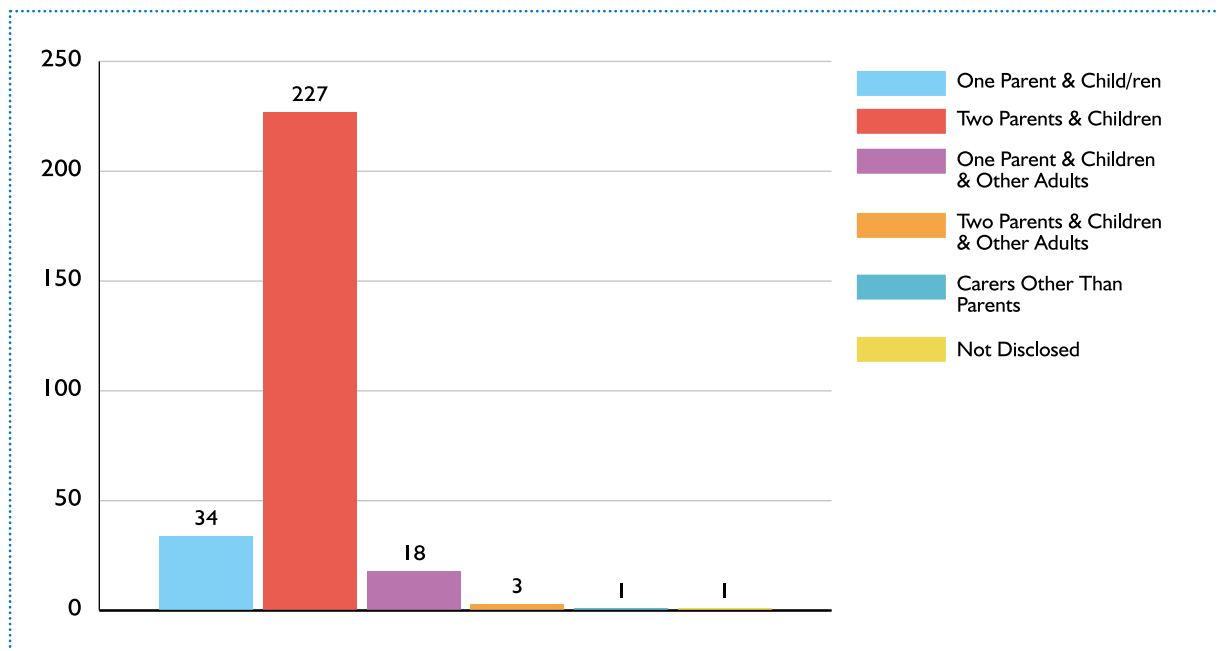
38% of babies whose mother had a medical card at the time of the 6 week baby check were exposed to ETS, compared to 17% of babies with non medical card holding mothers.

Table 3 *Nationality and ethnicity of babies seen for 6 week baby check*

Nationality	Ethnicity
Irish = 281	Traveller = 0
Other EU = 1	Asylum Seeker / Refugee = 0
Non EU = 2	Not Applicable = 284
Total = 284	Total = 284

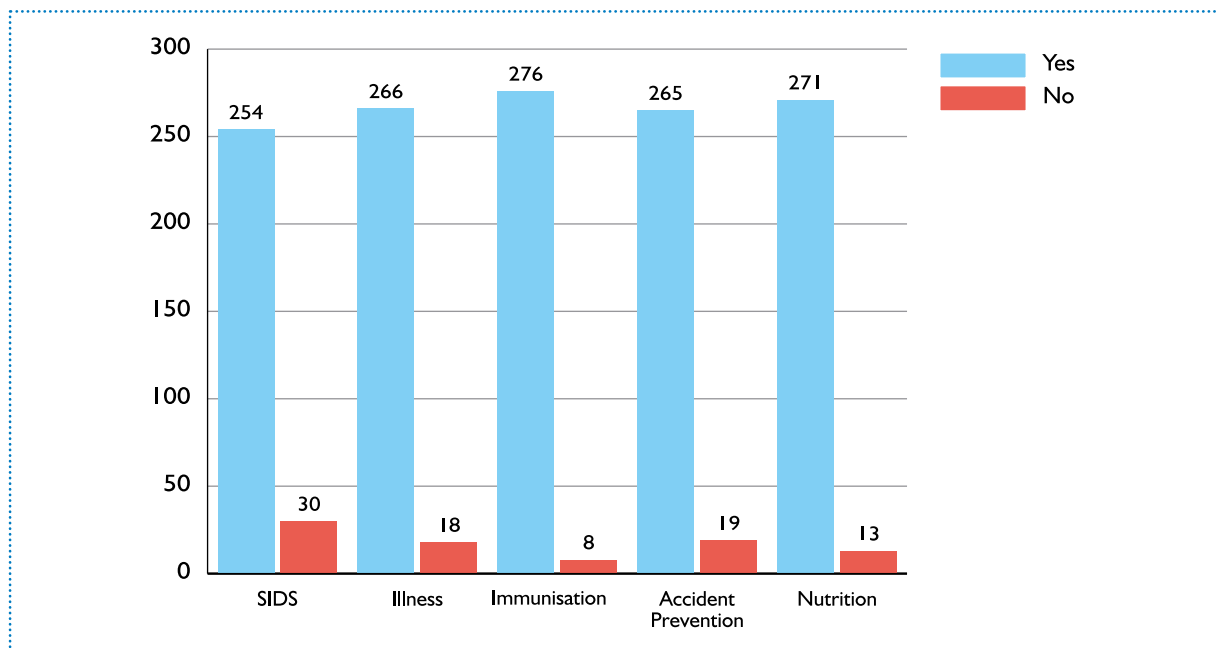
This table shows a very homogenous population not representative of HSE West (Donegal, Sligo, Leitrim & West Cavan), but due to practice selection in the recruitment process, which unintentionally gave preference to practices without significant populations from ethnic minorities.

Figure 35 Household composition of babies presented for 6 week baby check



The majority of babies (80%) lived in households with two parents. 12% lived in single parent households, and 6% lived with one parent and other adults.

Figure 36 Discussion of health promotion topics by GPs and Practice Nurses at 6 week baby check



This figure shows that the majority of primary care practitioners reported to have discussed the health promotion topics included in the data set.

Table 4 *Number of babies referred as a result of the 6 week baby check*

Examination	Satisfactory	Observation	In Treatment	Refer	Not Examined	Not Recorded
General	279	0	3	2	0	0
Growth	278	6	0	0	0	0
Vision	273	1	0	4	0	0
Hearing	279	0	0	0	1	4
Cardiovascular	275	5	1	0	0	3
Testes	142	4	0	0	11	127
Hips	271	3	1	2	2	5

4 babies had more than one noted abnormal finding.

This table shows that there was a small number of referrals to secondary services as a result of clinical examination at the 6 week baby check. In total eight referrals were made for seven children. Seventeen children were kept under observation for 19 reasons by their primary care provider and five were already receiving treatment for previously diagnosed conditions. Recording errors occurred in relation to testicular examination; there were only 140 boys in the project, but findings are recorded for 146, none of them resulting in referral.

10.1 Parents’ experience of new model for 6 week baby check in general practice

Methodology

A questionnaire (**Appendix G**) was sent to mothers of babies about whom returns were received from 30th June 2005 until 31st July 2005. Of 57 sent, 27 (47.3%) questionnaires were returned. A thank you and reminder letter was sent in August 2005, but no further replies were received.

Results

Mothers ranged in age from 17-19 years (1), 20-24 (1), 25-39 years (23) and 40-44 years (2); six were first time mothers.

Only four mothers reported having received the information leaflet, which formed part of obtaining informed consent from mothers to participate in the project.

Twenty six mothers agreed or strongly agreed that:

- they were satisfied with the physical examination of the baby
- they felt comfortable asking questions
- enough time had been given to the check

This is how mothers described the perceived benefits of the 6 week baby check:

“introduce our baby to our family doctor”

“we felt it was better to have a 6 week check with our own GP rather than wasting time at the hospital with a stranger”

“very thorough and not rushed, time was taken and everything was covered”

“to see how parents are coping, not just testing the reflexes”

“reassuring”, giving “peace of mind”, feeling “more confident”

“if there was a problem, it would be picked up at this stage”

“my doctor is very open, you can ask anything that is not covered”

Mothers’ postnatal check

Thirteen mothers did not have their check at the same time as their baby, while 14 did. Some mothers expressed dissatisfaction:

“I didn’t know there was such a thing”

In one mother’s perception, the check up consisted of being asked if she was “OK” and she felt *“annoyed at the lack of interest”*

Suggestions for improvement

- Issue a card to parents inviting them for the check.
- Provide more information including leaflets-one mother wanted more information on sudden unexplained death of infants (SUDI).
- Make sure to talk about how the mother is feeling.
- There should be a clinic for 6 week checks only.
- Mothers should be told during last antenatal appointment with their GP that the 6 week check must be booked and takes longer than an ordinary appointment.
- One mother was confused as she had been told by her Public Health Nurse that the baby would have a 6 week check, but was asked to come at 8 weeks when she contacted her GP.

10.2 GPs’ and Practice Nurses’ experience of 6 week baby check project

Methodology

A questionnaire was sent to all GPs who had participated in the project after data collection concluded in September 2005. This questionnaire was modelled on the pre project practice assessment questionnaire in order to allow comparative analysis. Of 15 GPs, 13 replied. The table below outlines findings.

Table 5 Delivery of 6 week baby check prior to and during project

Item	Before	After
Number of questionnaires returned (sent)	14 (15)	13 (15)
Number of GPs measuring uptake rates (%)	4 (29%)	5 (38%)
Measured and estimated uptake rates	90 - 100%	90 - 100%
Number of GPs examining babies at age 6 weeks	7 (50%)	2 (15%)
Number of GPs examining baby only (postnatal check for mother during another appointment) (%)	5 (36%)	7 (53%)
Average time of duration of baby check	10 - 30 minutes	20 - 30 minutes
Number of GPs involving Practice Nurse in 6 week baby check (%)	8 (57%)	11 (78%)

Measurement of uptake rates

The number of GPs measuring uptake rates increased from four GPs out of 14 in four practices before the project to five GPs out of 13 from five practices.

Examination of baby

Prior to the project, five GPs (36%) out of 14 examined the baby at the age of 6 weeks. This decreased to two GPs (15%) out of 13 after the project, one of whom varied her practice between examination of babies at 6 and 8 weeks of age.

In order to identify previously undiagnosed health problems, the baby check should be carried out at 6 rather than at 8 weeks. In order to increase uptake rates and reduce the number of visits a family need to make to their primary care provider for baby check, postnatal examination of mother and primary immunisations, a balance needs to be struck between the timing preferable from a clinical perspective and the potential inconvenience caused to families.

Combining baby check and primary immunisations

Out of the 11 GPs carrying out the baby check at 8 weeks of age at the end of project, five GPs combined this with immunisations, while six GPs did not.

Consultation prior to the project with mothers, whose babies had just undergone the check, highlighted that where immunisation took place at the same visit, this overshadowed the appointment with less attention being given to other issues.

Clinical setting

All practices included appointments for the 6 week baby check in their daily routine surgery sessions, both prior to and after the project. While mothers had expressed a preference for a separate ‘baby and parent only’ clinic, this might not be feasible in the majority of rural and semi urban practices due to the relatively small numbers of 6 week baby checks to be carried out. The setting up of a designated clinic would require protected staff time and facilities not available for other practice activities.

Staff involved in 6 week examination

During the project, the involvement of Practice Nurses in the delivery of the baby check increased, reflecting a higher level of multidisciplinary service provision and access of service users to a broader range of professional skills.

“caused us to focus and involve other clinical staff”

Content of the clinical examination

GPs welcomed the structure and extended clinical content provided by the new model. Six (46%) out of 13 GPs out said that participation in project had changed their clinical practice:

“tend to follow pattern set out in project”

“more detailed examination than before”

“new features and better documented”

“more thorough”

“always check red reflexes and femoral pulses now”

“more structured examination and recording of information”

Health promotion

Ten (77%) out of 13 GPs changed the way in which they discussed health promotion topics listed for inclusion in the 6 week baby check.

“more structured”

“SIDS, accident prevention – I didn’t discuss these before”

“more detailed, wider scope”

“more structured as prompted by data entry fields”

“more time spent discussing safety, accident prevention, feeding and recognising illness”

“always discuss hearing and sight now”

Communication with parents

There was no change in the way parents were contacted to attend with their child for the 6 week baby check.

Communication between parents and primary care providers had been described as very satisfactory both by service users and providers prior to the project, and there is little indication for change in this as a result of the project. The

following quotes reflect GPs’ open and positive attitude:

“parents seemed to feel they had more opportunity to ask questions and were impressed by detail of examination”

“parents impressed and reassured”

“check list format reassured us”

“tightened up the clinical examination and gave mothers more time to talk”

Of concern is that the information leaflet appears to have been rarely handed out or discussed with parents. It was designed to form part of the informed consent procedure for participation in the project, but more importantly provided information on the 6 week baby check. Parents consulted prior to the project had expressed the need for such information, but feedback from GPs indicated that there had not been a change in the patterns of discussions regarding purpose and clinical content of the 6 week baby check.

Benefits and disadvantages for primary care providers from participating in the project

Despite concern about the feasibility of completing the dataset for collection during consultations, most project participants expressed satisfaction with the overall aims and purpose of the project.

“we felt we were more comprehensive”

“made more aware of what is involved in 6 week check”

“more structured approach”

“well organised, good format”

Time constraints are always a consideration within the busy setting of primary care, and there was some concern expressed regarding this.

“time involved in training and setting up”

Long term feasibility of new model

The majority of GPs, 11 (85%) out of 13, favoured the dissemination of the new model for the 6 week baby check; two (15%) disagreed.

“it is definitely beneficial”

“it would seem a pity not to continue it”

Summary of results from post project GP questionnaires

- Uptake rates showed no change .
- Time to deliver 6 week baby check increased.
- Practice Nurse involvement increased.
- 46% of GPs changed their clinical examination.
- 77% of GPs changed their health promotion discussion.
- GPs expressed satisfaction with the structure provided for the new model regarding its positive impact on clinical examination and communication with parents.
- Information leaflet and consent were rarely discussed.
- IT programme posed challenges regarding comprehensiveness, functionality and time taken to complete data set for collection.

10.3 Other feedback

A meeting with project participants and other stakeholders was held in October 2005, where results from project data analysis and evaluation were presented and feedback sought. This was followed by a final meeting of the steering group in December 2005, which provided another opportunity to seek feedback from a range of health service providers who had contributed to the project.

Public health data

Practices selected for the project did not include those known to have a significant ethnic minority population proportion, i.e. members of the travelling, asylum seeking or refugee communities. While the project data analysis reflected this, it did not have the opportunity to demonstrate any differences between health needs and behaviours between different ethnic groups.

Concerns were expressed by primary care providers about the sociodemographic profile demonstrated by the project, showing a high proportion of single mothers, antenatal and postnatal exposure of babies to the adverse effects of smoking and low breastfeeding rates.

Public Health Nurse visiting

Despite concerns expressed by some GPs participating in the project about enquiring of parents whether they had received a visit from their Public Health Nurse, there was strong support for attempts to improve communication between Public Health Nurses and primary care providers to ensure services reach all families, especially those at risk of disadvantage and adverse health outcomes. Particularly in relation to practices located in the border region, there can be difficulty in tracking families, who might opt to attend services in different jurisdictions.

Health promotion and family support

While the 6 week baby check has an established and evidence based role in the core child health programme for screening and surveillance, its

benefits extend to the broader context of the role primary care has in contributing to positive health outcomes for children and their families. Parents are increasingly recognised as experts in identifying concerns regarding their children’s development. They require access to and the support of health professionals in optimising this role, and the 6 week baby check offers this, as well as giving primary care professionals an opportunity to identify families in need of support beyond that of a universal child health programme. In this context, it is important to attend to the needs of the mother, while fulfilling the requirements of a quality assured 6 week baby check.

Data collection, sharing and analysis

Data management needs to be an adjunct and support to health service delivery. The development of such systems requires co- operation between a broad range of stakeholders, which in the context of this project fostered improved understanding and working relationships between HSE, ICGP and primary care providers. This has the potential to benefit other areas of work, like the development of an ICT strategy for primary, community and continuing care or governance processes and structures for quality assurance of health service provision.

While uptake rates for the MIS in HSE West (Donegal, Sligo, Leitrim & West Cavan) are traditionally high, this is not the case in many other geographical, particularly urban, areas. Comprehensive patient registration and the development of call-recall systems are required.

GP Project Cost

Staff Category	Number	Pay Costs	Travel	IT Costs	Training	Total
Project Manager	0.2	€34,468.00				€34,468.00
Project Officer	0.2	€33,000.00	€3,000.00	€3,000.00		€39,000.00
GPs on Steering Group	2	€1,790.62	€519.17			€2,309.79
Practice Nurse on Steering Group	1	€164.18	€597.72			€761.90
GP Contracts	15	€6,000.00				€6,000.00
€40 per baby seen during project	284	€11,360.00				€11,360.00
Skills update refresher course			€1,648.39			€1,648.39
Project team meetings	10		€3,000.00			€3,000.00
INDC Website funded by GPIT Group, DoHC				€15,000.00		€15,000.00
Recruitment of Project Officer						€1,000.00
Standard development workshop						€2,000.00
Service User Consultation						€2,000.00
Materials						€5,000.00
Software Development				€40,000.00		€40,000.00
Evaluation			€1,412.80			€1,412.80
Report and dissemination						€10,000.00
Clerical Support & Overheads		€10,000.00				€10,000.00
Miscellaneous						€454.00
Total						€185,414.88

12.1 Existing practice

There is currently wide spread variability regarding the uptake and provision of the 6 week baby check as part of the statutory maternity and infant care scheme. Evidence of effectiveness and current recommendations for a national core child health programme in ROI support the delivery of a 6 week baby check in general practice. In light of changing population health needs and recognition of the pivotal role that primary health care services have in contributing to population health outcomes, the new model for the 6 week baby check presented in this report not only provides an opportunity for the early detection of health problems in infants that are amenable to early intervention and management, but is also designed to contribute to the formation of supportive relationships with primary care providers for children and their families.

12.2 New model

This new model has been developed based on the framework set out in *Best Health for Children- Developing a Partnership with Parents, 1999*:

- Quality of service provision
- Partnership with parents
- Flexible and responsive services
- Training
- Equity
- Accountability

The new model:

- Provides clear and evidence based examination protocols,
- Includes a multidisciplinary staff training module,
- Advises on referral criteria,
- Supports open communication between service users and professionals,
- Provides tools for clear documentation of clinical findings and outcome measures, allowing monitoring and evaluation of service provision,

- Integrates data concerning individual children into existing health record systems, e.g. the parent held PHR and immunisation databases,
- Contributes to a national child health information base for quality assurance of primary care led service delivery.

Recommendation 1

To include new model for 6 week baby check in national GP contract negotiations and in remodelled statutory MIS

Recommendation 2

To fully utilise the potential of 6 week baby check in facilitating the development of supportive relationships between families and primary care providers by focussing provision of 6 week baby check in primary care

Recommendation 3

To reconsider and develop the provision of maternal care and support as part of statutory MIS in primary care

12.3 Project Findings

The project identified:

- a high proportion of single mothers (31%),
- high levels of maternal smoking during pregnancy (20%),
- high levels of infant exposure to environmental tobacco smoke (24%) and
- low breastfeeding rates (15%).

While these results are in keeping with national trends, it was considered helpful, albeit sobering, for primary care providers to have access to such health behaviour information in relation to their practice populations.

Recommendation 4

To facilitate feedback on health behaviours of practice populations to primary care providers

Primary care providers recognised their role and that of other health service providers in supporting their patients in changing health behaviours.

Recommendation 5

To provide access for primary care providers to smoking cessation, breast feeding support and antenatal education programmes

Recommendation 6

To include assessment of alcohol consumption during pregnancy in maternal health data collection

The project revealed socio economic gradients for health behaviours like low levels of breastfeeding and high levels of smoking prevailing amongst medical card holders, compared to non medical card holders.

Recommendation 7

To raise awareness of the impact of social determinants of health on health behaviours and health inequalities, including educational, economic and environmental disadvantage

The project documented that:

- time taken to complete 6 week baby check lengthened,
- content and focus of health promotion issues improved and
- level of Practice Nurse involvement increased.

While the project was not designed to measure the impact of these changes on child health outcomes, they are in line with recommendations for good practice in primary care.⁴

Recommendation 8

To assess the impact of primary care child health service provision on child health outcomes through research and service monitoring, evaluation and feedback

In line with international recommendations for evidence based practice in child health screening and surveillance, there has been a shift towards screening children for medical problems like congenital heart disease, developmental dysplasia of hips and testicular non descent in early childhood.¹⁹

While there was a small number of instances where children were kept under observation within primary care (19) or referred (8) to further assess clinical problems identified as a result of 6 week baby check, the 6 week baby check provides a key opportunity to assess the health status of all children.

Recommendation 9

To ensure medical assessment of all children at 6 week baby check

Feedback from parents and service providers emphasised the key opportunity for developing and strengthening supportive relationships between families and primary care providers.

Recommendation 10

To facilitate access of all children and families to the 6 week check in primary care by heightening awareness of its potential and availability through information provision and education

12.4 Communication, information and integration

The project has contributed to improved communication amongst service providers in a variety of health care sectors, including primary care, community care, secondary care and population health.

Recommendation 11

To further the development of primary care teams, integrating key service providers of health services to children and families at primary and community care level with strong links to secondary care within community child health

Recommendation 12

To strengthen resources available in Public Health Nursing services for the provision of child health services and integration with other child health service providers

Consultation with mothers identified the need for better information regarding purpose, content and outcome of the 6 week baby check.

Recommendation 13

To include information on the 6 week baby check in PHR to be made available to all parents of newborn children and to ensure better use and distribution of service user information leaflet

The developed software can be configured to print findings from the 6 week baby check for parents to include in the parent held PHR already in operation in HSE West (Clare, Limerick & Tipperary) and soon to be introduced in HSE West (Donegal, Sligo, Leitrim & West Cavan) and HSE Northern Area (Cavan, Monaghan, Louth).

Recommendation 14

To disseminate the parent held PHR nationally

12.5 Monitoring and evaluation

The development of data collection tools and processes posed many challenges. While the project was not designed to primarily focus on information technology developments, it provided an evidence based data set for collection at the 6 week baby check, which allows for service monitoring, evaluation, audit and measurement of outcomes. This can be integrated with other existing electronic child health information management systems and contribute to the development of an electronic child health record (eCHR).

Recommendation 15

To develop a national framework and governance structure for integrating electronic child health information systems

The INDC provides a user friendly electronic interface for data collection, cleaning, reporting, monitoring and feedback based on a previous model within the ‘HeartWatch’ project. Data analysis at HSE West (Donegal, Sligo, Leitrim & West Cavan) level was complicated, as there was no functioning electronic interface to integrate data received from primary care practices into a reporting structure for the project.

Recommendation 16

To develop an electronic interface to integrate and exchange child health data between HSE and primary care

The main software providers in primary care within ROI contributed to and supported the project. Practices struggled at times to work successfully with a software tool, which remains under development and requires refinement.

Recommendation 17

To improve the functionality of the data management system

Uptake rates for the 6 week baby check were high at 90 - 100% in this project, but could only be estimated in the absence of patient registration.

Recommendation 18

To introduce universal patient registration with health service providers in primary care

12.6 Data sharing, consent and confidentiality

In discussion between HSE, ICGP and data protection experts, concerns regarding data sharing arose that are common to all developments relevant to an eCHR. These include data sharing between service providing agencies, security and levels of access to information on individual clients within organisations, confidentially and consent.

Recommendation 19

To augment the role of the Personal Public Services Number (PPSN) as unique identifier

Recommendation 20

To harmonise data flows between HSE, ICGP and other agencies to facilitate integration of GP generated child health data with existing electronic child health information systems (PHR, immunisations, child care)

The project endeavoured to address the issue of informed consent in the context of existing data protection legislation. Despite the development of a service user information leaflet approved by the Office of the Data Protection Commissioner, this was rarely given to or discussed with parents of babies presenting for the 6 week baby check.

Recommendation 21

To build awareness and capacity in primary care to appropriately deal with requirements under data protection legislation

Recommendation 22

To establish a data protection ethics committee to guide the development and roll out of this and similar projects in light of requirements under the data protection acts, related existing and future legislation

Data transfer of non anonymised data from primary care practices to HSE West (Donegal, Sligo, Leitrim & West Cavan) required a secure mechanism. The existing electronic GP e-mail network proved difficult to use.

Recommendation 23

To improve secure electronic communication mechanisms between primary care providers and HSE and to explore the feasibility of developing web based applications requiring inscription and HL7 messaging standard development

The recent development of nine centile growth charts for Irish children gives an opportunity for inclusion of an electronic version in GP child health software to calculate centiles and identify children where there are concerns about growth, as well as collection of population health data in the context of an obesity epidemic.

Recommendation 24

To develop and make available to child health practitioners in ROI an electronic growth monitoring tool

Data analysis and feedback at the level of practices rather than individual GPs requires a practice identifier not currently available other than within the context of individual projects.

Recommendation 25

To develop practice identification mechanisms for information management and performance monitoring as part of GP contract renegotiations

12.7 Staff training

The skills refresher course was designed to meet the needs of primary care providers in child health. GPs and Practice Nurses welcomed this opportunity to improve their skills in child health service delivery and would have liked more practical training in some aspects of child health examination and promotion.

The training module had been approved for CME credits both by An Bord Altranais and the ICGP, and participants were compensated for expenses and time required to attend. Practitioners are required by their governing professional bodies to engage in continuous professional development, often to be undertaken out of hours and on individuals’ initiative.

Recommendation 26

To include training in child health for GPs and Practice Nurses on a multidisciplinary basis as part of the new GP contract to ensure CME activities are part of the working day in primary care, fulfilling requirements under competence assurance

Participation of Practice Nurses within this project was made difficult by the absence of national and regional administrative support and professional development service frameworks for this group of professionals.

Recommendation 27

To strengthen the role of Practice Nurses within primary care service provision by providing a framework for training, accreditation and continuous professional development and support for this at regional and national level

The role of parents as experts in the development of health and well being of their child again became apparent in this project.

Recommendation 28

To provide staff training and awareness raising to strengthen the role of partnership in working with parents

12.8 Feasibility of national dissemination

Assessment of existing practice in consultation with service users and providers showed a high level of satisfaction with delivery of the 6 week baby check within general practices in HSE West (Donegal, Sligo, Leitrim & West Cavan). Uptake rates are particularly high in this area, as are Public Health Nurse visiting rates to mothers of newborn babies.

Practitioners participating in the project were chosen based on selection criteria that favoured computerised practices with a high level of multidisciplinary working and experience in participating in similar projects or other quality improvement initiatives. The ability of these practices to support the delivery of a new model for the 6 week baby check cannot be assumed to be in existence throughout primary care in ROI. Amendments to the data set have been made

as a result of the project evaluation, but further testing of revised GP software is required to ensure maximum ease of use and appropriateness of dataset.



Recommendation 29

To develop a national steering and governance process to oversee, support and disseminate the development of projects like the HSE West (Donegal, Sligo, Leitrim & West Cavan) GP child health project

12.9 Cost

Time required to carry out a 6 week baby check with data entry is between 20 and 30 minutes. This needs to be recognised in the fee payable to primary care providers.

The project provided additional remuneration to participating practices in recognition of the additional time required to deliver a comprehensive 6 week baby check.



Recommendation 30

To redesign fee structure for MIS and include new model for 6 week baby check in national GP contract renegotiations