

Improving perinatal care in Southern Area Health Service: the Families First Integrated Perinatal and Infant Care Program

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INTRODUCTION

Over the last few years there has been a wealth of new research indicating the importance of a child's environment and experiences in the first years of life on physical and mental health across the life span. This has resulted in new government interest and expenditure in children and the families that support them, such as the NSW Families First initiative. NSW Health is a partner in this whole of government strategy that essentially aims to improve the effectiveness of prevention and early intervention services for families with children zero to eight years.¹

The challenge for Southern Area Health Service (SAHS) was to translate this 'early years' knowledge and recent government directives into an appropriate rural service delivery model that was effective, sustainable, low cost, multi-disciplinary, and would support the required new evidence based clinical practice change. This resulted in the contribution to the Families First strategy of a unique local initiative by SAHS: The Families First Integrated Perinatal and Infant Care Program (FF/IPC), an area wide primary health model of care for the perinatal period (pregnancy to age one). The model includes: integration of services across the perinatal care continuum; comprehensive training; universal psychosocial assessments and targeted follow up, supported by a clearly defined communication structure.

ABOUT SOUTHERN AREA HEALTH SERVICE

The SAHS covers an area of 52 214 square kilometres in South Eastern NSW. It surrounds the ACT and extends from Crookwell in the north to the Victorian border in the south, from Young and the Snowy River in the west and from Batemans Bay along the coastal strip to Victoria. SAHS had a population of approximately 194 235 (2001 Bureau of Statistics Census), with approximately 2000 babies being born each year to its residents.

There are six Planning Divisions within SAHS, each under the direction of a General Manager. These Planning Divisions reflect geographic localities and networking of health services within SAHS. The Planning Divisions are supported by a central Executive and management structure that provides policy and program support, and strategic direction.

BACKGROUND

Psychosocial risk factors impact on a family's well-being and ability to parent, and subsequently, the infant's development. The early years are critical for the development of vital physical, cognitive and emotional competencies that will affect a child's behaviour and health throughout life.² Children who receive inadequate or disruptive care due to parental

psychosocial difficulties are more likely to develop learning, behavioural or emotional problems later in life.³

It is now well recognised that, from birth, nurturing relationships with caring adults are essential to a child's healthy development.⁴ It is the quality and stability of relationships in the first few years that form the basis for many later developmental outcomes such as, sound mental health, school achievement, capacity to develop and sustain relationships and, eventually, to be a successful parent.⁵

For many women, and their families, the transition to parenthood is one of the most challenging and significant life changing events ever experienced.⁶ During this time a new mother may experience symptoms of anxiety, irritability, poor concentration and depressive mood, which typically exert a profound effect on interpersonal relationships.⁷ It is likely that this will also extend to the new relationship the mother is establishing with her infant.⁸

There is an association between maternal depression and reduced quality of maternal infant interaction.⁹ It is reported that 10–15% of women experience major postnatal depression¹⁰, with approximately one-half of these developing depression antenatally.¹¹ In addition, up to 50% of partners of women with postnatal depression will also develop depression.¹² Postnatal depression is a major public health issue with adverse consequences, not just for the women themselves, but also for the relationship between the mother and child, and the child's development.¹³

Depressed mothers are less sensitively attuned to their infants, including being less sensitive in reading their infants sleep, wake and cry signals.¹⁴ They are also less focused on what the infant is experiencing and not as likely to provide responses that compliment the infant's own communication attempts.¹⁵ This is of concern for the infant's psychological well-being, as it is during this early postnatal period, when a new mother may be experiencing distress, that the infant is particularly sensitive to both the time spent, and the quality of interactions, with his mother.¹⁶

As there are currently no risk indices with adequate sensitivity or specificity for the prediction of postnatal depression, it is recommended that psychosocial screening focuses not on the prediction of postnatal depression but rather on preventative and early identification and intervention strategies.¹⁷

There are many other factors besides depression and anxiety that can disrupt the parenting process and subsequent well-being of the infant including parental health problems, lack of social support and difficulties in the child.¹⁸

In the NSW 2001 Child Health Survey 35% of infants under 12 months were reported by their parents to have behavioural issues and 28% of infants were identified as having feeding problems.¹⁹ This highlights that a significant proportion of parents perceived that their child's behaviour was difficult, even though these children were still under 12 months of age. It is interesting to note that in a Western Australian study in 1999 indicated a similar number of parents were experiencing difficulties with their child's behaviour with up to 30% of school age children having mild to severe behavioural problems.²⁰

There is now clear evidence that early intervention with vulnerable families will improve outcomes across a broad range of physical, psychological and social indicators and may lessen the development or impact of health problems across the lifespan.²¹ Therefore it is essential that the psychosocial risk factors that impact on a families well-being and ability to parent are identified and preventative and early intervention strategies implemented.

It is against this background that the draft NSW Health Home Visiting²² and Integrated Perinatal and Infant Care²³ guidelines were written, both of which recommend a comprehensive psychosocial assessment followed by appropriate targeted intervention that includes nurse home visiting. The FF/IPC program is Southern's response to the need to integrate these two initiatives and Families First into a well defined perinatal program, suitable to the particular needs of rural communities, that could be incorporated into the existing service system.

AIM

The FF/IPC program aims to improve the prevention and early intervention services for families with children (age 0–1). Specifically: to implement a co-ordinated, sustainable perinatal service utilising existing resources; to universally assess parental well-being and ability to parent; and, the possible assistance required in order to promote infant development and family functioning, in the context of a supportive multi-disciplinary environment.

To achieve this, there needed to be a change in clinical and managerial practice from a primarily reactive model to an early intervention and prevention one, and from a tendency to work singularly and in silos, to working collaboratively with a multi-disciplinary approach to both planning and service delivery.

The overall aim of the program is to support clinicians to better support families to optimise the health and well-being of their children.

METHOD

Program design

From the outset, funding for implementation of the government initiatives was minimal and therefore program design and implementation needed to ensure maximum gain for the investment of time and money. It was decided to adopt a 'joined up' approach in order to maximise the efficient use of the few resources available to support the model of perinatal care and program implementation in each Division. The FF/IPC program is a model that is underpinned by a framework that relies upon collective partnerships across hospitals, community and mental health, with clinicians also working within a partnership framework with their clients.

The FF/IPC project team consists of Area program managers representing the key internal stakeholder services: Families First, mental health, maternity, drug and alcohol and women's health. The team initially reviewed the Families First Regional Plan, NSW Health draft guidelines regarding best practice in the perinatal period from both the Centre for Mental Health and the Primary Care Branch, and identified where these were complimentary and the likely implementation issues for clinical application in SAHS. This review then informed the development of the program.

A Planning Division was identified as a pilot site to test program design and inform future application across the Area. The project team worked extensively with clinicians and managers from this Division who helped the shape the new clinical pathway, and identified both the barriers and benefits they perceived would be associated with the implementation of the program. Key concerns identified were the limited capacity (human and financial) to

implement new programs at the local level and insufficient capacity to cope with the potential increase in referrals resulting from the routine psychosocial assessments.

Following implementation of the program in the pilot Division, a formal evaluation and review process was established to gain clinician, and manager, feedback about the effects on staff and their clients. This formal review was then used to modify the program prior to area wide roll out.

Over the two years since program launch, a primary health care perinatal network has been established across the Area to support program implementation, with the first one being established in the pilot site. Essentially a multi-layered communication structure has been established in each division across the Area that includes Area staff, local managers and clinicians from mental health, maternity, drug and alcohol, women's health, allied health and child and family.

Initially Aboriginal perinatal health was only co-ordinated within a specific Indigenous program in one of the planning divisions, the Koori Maternity Access Program. More recently, the FF/IPC program design has been broadened to include Aboriginal health staff at every level of the primary health care perinatal network to mainstream, and improve, care to Aboriginal women and their babies.

Program elements

The most effective programs start before birth, are continuous, use well trained and supported staff, are home based and develop an appropriate alliance with parents.²⁴ Preventative action needs to be incorporated into existing service structures if they are to survive and be effective.²⁵ On this basis, an area-wide implementation model was developed with a number of key program elements.

Perinatal Care Continuum: In the perinatal period although the mother and her infant may come into contact with health staff on numerous occasions, which has the potential for optimising the early identification of health problems, the risk of fragmentation of care is significant due to traditional discontinuities in service provision.²⁶ Consequently, the introduction of a clear and defined perinatal care continuum was considered essential for effective assessment and ongoing management of clients in this period.

It was decided in Southern to begin this process at the first presentation to hospital to 'book in' in preparation for delivery, and follow through to the end of the first post partum year – the aim being to optimise opportunities for prevention and early intervention by capturing clients at the earliest point of entry to the health system. This service model was endorsed by the Executive and incorporated within perinatal clinical guidelines for SAHS and followed by all staff involved in the care of women and their babies.

Significantly this program involves other health provider partners. General practitioners have been included in this process through education sessions and correspondence from local health teams, including care plans with the client's consent, to general practitioners informing them of care provided. With the significant number of babies born in the ACT it was also important to link those babies back into services available in SAHS and a referral protocol and process was established with ACT birth hospitals.

Documentation: Standardised assessments and documentation were introduced. Psychosocial assessments need to be validated, acceptable to consumers and staff, cost effective and accessible.²⁷ Dr Marie-Paule Austin's self report measures – the Antenatal Risk Questionnaire

(ANRQ) and Postnatal Risk Questionnaire (PNRQ) were chosen, as well as a modified version of the needs checklist developed for The European Early Promotion Project.²⁸

Service Delivery: The universal home visit (UHV) is the mechanism for the delivery of postnatal psychosocial assessment, while prenatal assessments occur at the initial hospital 'booking in' appointment.

After the antenatal and postnatal interviews the nurses make a judgement about the families needs using the SAHS modified needs checklist. This is a checklist of risk factors that include needs identified in the family, child, mother child relationship and the environment. If vulnerabilities are detected as a result of this assessment the clinician then discusses the case at a local multi-disciplinary meeting and mobilises resources within, and external to, health to support families in a planned, organised and parent led way. The aim is to provide the best possible assistance available to that family utilising the pooled resources of the local community.

The local multi-disciplinary meeting is known as the FF/IPC specialist meeting and consists of a group of the most experienced local clinicians from mental health, child and family, maternity, drug and alcohol, allied health, child protection and Aboriginal health. This model was developed due to the recognition that it would not be possible to have perinatal and infant specialist staff in every Division, given the geographical spread of service locations and capacity to recruit such specialist staff. The idea was to pool the local expertise currently available and provide them with extra training and support to help ensure long term sustainability of the program.

Training: Clinicians needed to have the training and support to take a preventative and family centred approach, so that in particular, the child and family health nurses and midwives could develop the skills necessary to move from the traditional tendency towards a physical focus to a more holistic focus, encompassing psychosocial issues. The aim was to train primary health care clinicians to deliver preventative health care within a population approach and therefore a comprehensive training program was established to meet that need. The training program included: briefing and service mapping; introduction to, and how to deliver, psychosocial assessments; a partnership based approach to client care; and, promotion and early intervention for the development of optimal infant health. This was delivered on site and at no cost, except for staff release time, to the Divisions.

Data Collection and Evaluation: A database was established to measure the effects of program implementation, assist with future planning of health services and facilitate external and internal reporting requirements. Specifically, it measures client vulnerability and service response from the universal psychosocial assessments, and follow up nurse home visiting. Recently the data collection process has been expanded to capture activity within the specialist teams and monitor individual client outcomes.

Mechanisms for clinician and management evaluation of program implementation have also been established and Divisions are reviewed three monthly for the first six months and then six monthly.

Research: A research project was commenced to measure the impact of the training and a brief nurse home visiting intervention in the early postnatal period and compare this intervention to standard practice prior to implementation.

Program implementation

The FF/IPC program implementation has been a staged process, continuing to roll out one Planning Division at a time. Lessons learnt from the roll out in each Division inform the overall program design. Table one presents the time frame for main program elements across the Divisions.

Table 1 SAHS FF/IPC Program Implementation Plan

Program	Detail	End 2002–03 Year 1	2003–04 Year 2	2004–05 Year 3
Service Implementation	UHV	100%		
	Prenatal Assessments	17%	50%	100%
	Postnatal Assessments	17%	50%	100%
Communication Structure	Manager's meetings	17%	83%	100%
	Specialist meetings	17%	67%	100%
Training		17%	50%	100%
Data Collection		100%		

The roll out has been supported by the Area project team who have guided the Divisions through the implementation stages, utilising a generic implementation plan that is then adapted as necessary to the specific localities.

Local support to the Planning Divisions is provided primarily by a small team of part time project workers allocated to specific divisions. These project workers are senior clinicians from social work, psychology, child and family nursing and midwifery, and they provide both program and clinical support to the Divisions.

RESULTS

Ongoing data collection from across the Area assists in monitoring service implementation and meeting local and government reporting requirements and is linked with the staged rollout of the program elements. As the program started with the pilot site, it is this Division that the most comprehensive data is available. Information is generally collated at service level rather than at individual client level. Research currently undertaken at one Division will inform the analysis of program implementation in terms of individual client outcomes.

UHV is a core component of the Families First Strategy which aims to provide services to families in settings more convenient to them. This project element has been implemented across SAHS. There has been a significant improvement in the delivery of the UHV from 48% of families receiving a UHV by four weeks of birth up to 77% over an 18 month period.

Women have indicated strong support for the program with recent analysis of data from the pilot site indicating 99% of women attending the midwives clinic accepted the offer of prenatal psychosocial assessment and 77% of eligible women accepted a postnatal assessment within four weeks of delivery. From these assessments the most common vulnerabilities, both prenatally and postnatally, were evidence of anxiety (current/past) and history of depression. Prenatally the other most common vulnerabilities were: major stresses or change in last 12 months; grief or loss issues; and lack of emotional support from own mother. Postnatally,

reflecting the impact of the baby, the other most common vulnerabilities recorded were infant feeding difficulties; constant crying/unsettled; and mother's own childhood abuse.

Having identified need for additional support for clients from the assessments, clients were referred to either level one (universal) or level two (early intervention/prevention) services. No families were referred prenatally or postnatally to level three (complex or specialist) services – which had been a concern of clinicians with program implementation. However, for the families that were being followed on the nurse home visiting sustained program, around five per cent were referred to level three services – mental health or Department of Community Services.

The FF/IPC program is fully implemented to evaluation stage in two divisions. Results from the three-month staff survey from pilot site and one of the Divisions include:

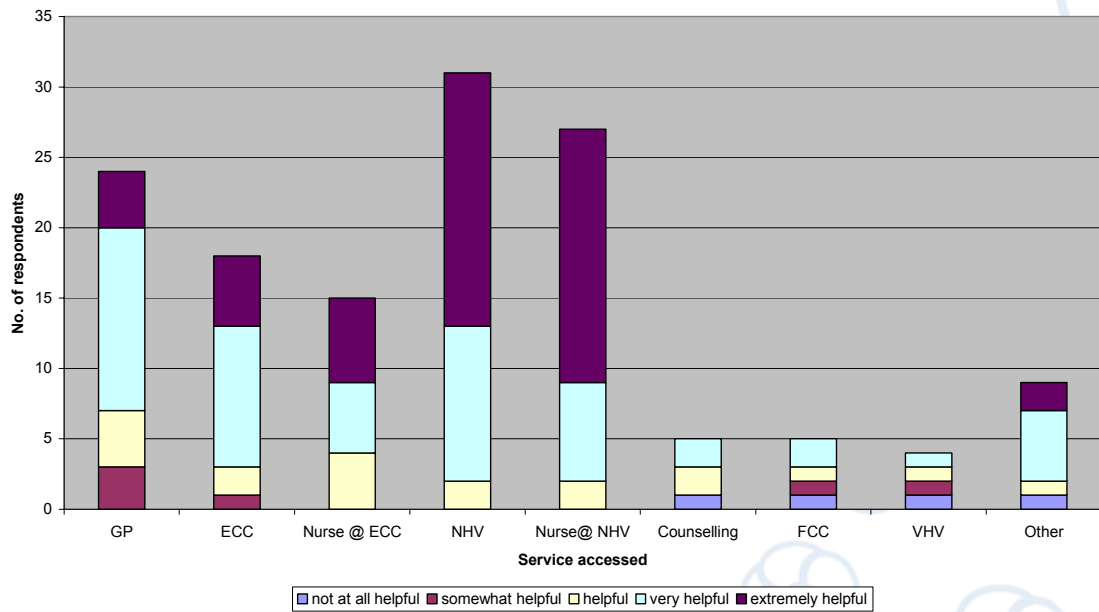
- 90% agreed that the program has resulted in a positive change in clinical practice (N=20).
- 89% agreed that the presentation of client cases to the specialist team meetings increased staff confidence in their perinatal clinical practice (N=19).
- 100% agreed that presentation of client cases to the specialist team meetings assisted the development of appropriate case management plans (N=18).
- 100% agreed that the program resulted in advantages for women (N=21).
- 100% agreed that the program resulted in advantages for infants (N=21).
- 100% agreed there was a continuum of care for women in the perinatal period following program implementation (N=20).

While research of individual client outcomes is ongoing, early results from consumer evaluations of service interventions within the research program indicate:

- 72% of clients (N= 32) accessed at least three services in the first two months postnatally.
- The top three services accessed in rank order were: nurse home visiting, general practitioner and early childhood clinics. These three services accounted for 75% of the range of services reported as accessed.
- 100% of respondents found the nurse home visiting service helpful (scoring helpful or extremely helpful), 60% reported extremely helpful
- 88% overall found their general practitioner to be helpful (scoring helpful or extremely helpful), 17% extremely helpful
- 94% overall found the early childhood clinics helpful (scoring helpful or extremely helpful), 28% extremely helpful.

Figure 1 presents the consumer evaluation by service and service provider for the early childhood clinic and nurse home visiting services.

Figure 1 SAHS FF/IPC Program – consumer evaluation



CONCLUSIONS

SAHS has successfully implemented a system that is integrated across the perinatal care continuum; it appears acceptable to clinicians and clients; is low cost through reorienting and increasing the efficiency of existing resources; and, ultimately sustainable.

The model of program implementation has been successful to date for SAHS due to the partnerships, clear processes of working together and a concept of shared responsibility for service delivery in local communities. This has been achieved across professional disciplines and Divisions.

Learning from the experience so far, opportunities exist for enhancing the program by increasing consumer and general practitioner involvement and exploring opportunities for greater inclusion of fathers.

Given the positive results so far, SAHS will continue to utilise this model with other components of Families First. Other rural and metropolitan Area Health Services have linked with SAHS throughout program development and implementation and are exploring applicability for their Areas. Practical experience gained through the implementation of this program by SAHS has also assisted the formulation of state-wide directions.

RECOMMENDATIONS

Providers of perinatal care services, pregnancy to age one, may consider the SAHS FF/IPC program useful in the review or development of their own perinatal services.

The perinatal primary health model may also be useful for the implementation of other population or primary health care programs.

PRESENTERS

Tricia Linehan is the Co-ordinator of the Families First Program for Southern Area Health Service (SAHS). She has been the leader of the project team responsible for the implementation of the Families First Integrated Perinatal Infant Care Program at SAHS. Tricia's background is in child and family nursing where she has held a range of positions in community centres including Co-ordinator of the Family Care Centre at Queanbeyan Community Health Centre. Her recent postgraduate studies have been in the field of infant mental health and she is currently co-ordinating research locally, specifically in the area of health promotion and prevention of infant mental health.

Gabrielle Mulcahy is currently the Manager of the Child and Adolescent Mental Health Service in Southern Area Health Service (SAHS). Gabrielle's background is in social work and psychology and her interests include infant mental health, attachment and eating disorders. Gabrielle has previously worked in the UK and at specialist services in Sydney, including Redbank House and the Children's Hospital at Westmead. She has been involved as part of the SAHS Families First Integrated Infant and Perinatal Care planning team since its inception in August 2002 and represents mental health services. She is also a member of the NSW Integrated Perinatal and Infant Care Advisory Committee.

REFERENCES

- 1 NSW Government – Cabinet Office. Families First – A Better Start for Children in NSW. Resource folder, 2003
- 2 McCain MN. & Mustard JF. Reversing the Real Brain Drain: Early Years Study, Final Report, April 1999
- 3 Cynader M.& Mustard JF. Brain development competence and coping skills, Founders Network Report. Spring 1997, Vol 1, Issue 1 Infant Care brochure
- 4 National Scientific Council on the Developing Child. Working Paper No. 1: Young children develop in an environment of relationships, 2004
- 5 National Scientific Council on the Developing Child, 2004. *ibid.*
- 6 Roberts R. et al 2002 – The European Early Promotion Project: Promoting the transition to parenthood and preventing psychosocial problems in children. *Community Practitioner* December 2002:464–468.
- 7 Murray L. The effects of infant behaviour on maternal mental health. *Health Visitor Journal* 1997: 70(9):334–335.
- 8 Murray L. 1997 *ibid.*
- 9 Stein A., Goth D., Bucker J., Bond A., Day A. & Cooper P. The interaction of maternal and infant vulnerabilities on developing attachment relationships, 1991. *British Journal of Psychiatry*, 158: 46–52.
- 10 NSW Health. Improving mental health and well being resource kit, Integrated Perinatal and Infant Care brochure, 2003.
- 11 NSW Health, 2003. *ibid.*
- 12 NSW Health, 2003. *ibid.*

- 13 Lumley, J & Austin. M-P. What interventions may reduce depression after birth. *Curr Opin Obstet Gynaecol.* 2001, 13: 605-611.
- 14 Murray L. 1997. *ibid.*
- 15 Slvakin A. Bonding failure; I don't know this baby, she's nothing to do with me, 1998. *Clinical child psychology and psychiatry*, 3(1):11-24.
- 16 Murray L. 1997. *op cit.*
- 17 Austin M-P. & Priest S. 2004 *ibid.*
- 18 Davis H., Day C. & Bidmead C. *Working in partnership*, The Psychological Corporation Limited, London, 2002.
- 19 Centre for Epidemiology and Research, NSW Department of Health, New South Wales, *Child Health Survey 2001.* *NSW Public Health Bulletin* 2002; 13 (No. S-3): 44
- 20 NSW Health. 2003, *op cit*
- 21 McCain MN & Mustard JF, 1999 *op cit*
- 22 NSW Health. *Families First Health Home Visiting Practice Guidelines*, January 2002.
- 23 NSW Health. *NSW Integrated Perinatal and Infant Care Program: Perinatal psychosocial assessment*, February 2002.
- 24 Purra K. et al 2002 - The European Early Promotion Project: Promoting the transition to parenthood and Preventing Psychosocial problems in Children. *Infant Mental Health Journal* 2002; 23(6):606-624.
- 25 Tsantis J., Smith M., Dragonas T. & Cox A. Early mental health in children through primary health care services: A multi-centre implementation. *International journal of mental health promotion.* August 2002; volume 2, issue 3: 5-17.
- 26 Austin M-P. Perinatal mental health: opportunities and challenges for psychiatry. *Australasian psychiatry*; December 2003, volume 11, no. 4: 399-403.
- 27 Austin M-P. Antenatal screening and early intervention for "perinatal" distress, depression and anxiety: where to from here? *Arch Womens Ment Health*; 2004: 1-6.
- 28 Roberts R. et al 2002. *op cit.*