



# JOURNAL

NEW ZEALAND COLLEGE OF MIDWIVES, NOVEMBER 1990



**“WOMEN IN PARTNERSHIP”**

# BOOKS FOR THE MIDWIFE

**PUBLISHING SOON**

## **AL-AZZAWI, F.A.; A COLOUR ATLAS OF CHILDBIRTH AND OBSTETRIC TECHNIQUES**

**Published by Wolfe SEPTEMBER 1990 \$142.00 approx**

Contains photographs with appropriate commentary which illustrate the precise sequence of events in an absolutely normal birth. This book will be an ideal reference guide to trainee and practising midwives, nurses, medical students and doctors in training.

**CONTENTS:** Antenatal care, The mechanism of childbirth, The management of Labour, Normal labour, Operative vaginal delivery, Breech presentation, Delivery of twins, Caesarian section.

ISBN 0 7234 0940 4; 144 pages; 265 colour photographs; 71 black and white photographs.

## **NEW EDITIONS**

SWEET, B; "MAYES MIDWIFERY" 11th edition published by Bailliere Tindall. \$112.00

BALASKAS, J; "NEW ACTIVE BIRTH" published by Unwin. \$29.00

MOORE, "REALITIES IN CHILDBIRTH" 2nd edition published by Saunders. \$189.00

LLEWELLYN-JONES, "FUNDAMENTALS OF OBSTETRICS & GYNAECOLOGY Vol.1  
Obstetrics 5th edition published by Faber & Faber \$64.00

LLEWELLYN-JONES, "FUNDAMENTALS OF OBSTETRICS & GYNAECOLOGY Vol.2  
Gynaecology 5th edition published by Faber & Faber \$55.00

## **CAROLINE FLINT**

FLINT, C; "SENSITIVE MIDWIFERY" published by Heinemann \$49.00

FLINT & CRONK: "COMMUNITY MIDWIFERY" published by Heinemann \$39.00

AVAILABLE FROM

**Medical Books (NZ) Ltd, Auckland.**

A Division of Butterworths of New Zealand Ltd.

8 Park Avenue, PO Box 8565, Symonds Street, Auckland, New Zealand  
Ph (09) 733-772/733-773 Fax (09) 733-282

# C O N T E N T S



ISSN 0114-7870  
No.3. November 1990

The New Zealand College of Midwives Journal is the official publication of the New Zealand College of Midwives. Single copies are \$4.00

**Editorial Collective**  
P.O. Box 249  
Palmerston North

Andrea Gilkison  
Karen Guilliland  
Chris Hannah  
Julie Hassen  
Judy Hedwig  
Marion Lovell  
Helen Manoharan  
Bronwen Pelvin  
Liz Smythe

**Published by:**  
The Dunmore Press  
P.O. Box 5115  
Palmerston North

**Cover design by:**  
Margaret Jackson: Poster for the 1990 Midwives Conference.

#### **Contributions:**

Original contributions such as reviews, forthcoming events, scholarly papers, research and articles of interest are welcomed. Artwork and photos will also be gratefully accepted. We can return originals. Articles should preferably be less than 2,000 words, and typed or neatly handwritten on one side of the paper. Articles must be signed by the author as being their own original work.

#### **Letters:**

Letters that are addressed to the editorial collective or the editor are assumed to be intended for publication. Please indicate clearly if they are not.

Letters and articles printed in this edition do not necessarily express the opinions of the editorial collective. They are the views and opinions of the authors.

Articles may be reprinted with the written permission of the editorial Collective.

<b>Editorial</b>	<b>4</b>	
<b>Letters to the Editor</b>	<b>5</b>	
<b>Midwife to Midwife</b>	<b>6</b>	
<b>Political Comment</b>	<b>7</b>	Joan Donley
<b>Report from the 1990 Midwives Conference</b>	<b>9</b>	Karen Guilliland Julie Hassen
<b>Appropriate Technology For Birth</b>	<b>10</b>	Marsden Wagner
<b>Conference Photographs</b>	<b>12</b>	
<b>The Domino Birthing Option</b>	<b>17</b>	Lynley McFarland
<b>Ultrasound</b>	<b>19</b>	Joan Donley
<b>Coming Events</b>	<b>22</b>	
<b>Book Review</b>	<b>22</b>	

# Women in Partnership

**T**WO YEARS SEEMED A LONG TIME, WHEN back in 1988 in Auckland some 'rash' Otago midwives volunteered the Otago Region to host the first New Zealand College of Midwives conference. We had no idea what this would mean.

One of the things it did do, was bring together a group of five midwives and two consumers, to form the conference committee. Over the months this group developed and grew, delivered three babies and became a close knit, supportive group of women. We learned to work collectively, to value each others' strengths, whilst we certainly put much energy into the conference organisation, our meetings became a precious time to be together, to give us time out from children, partners and work and to enjoy each other.

When we looked back on the conference and our enjoyment of it, we recognised that what made it so special was the fact that women were together, learning and enjoying each other - just as we had done in our smaller group.

At the conference there was a diverse group of 170 women from all over New Zealand, from all kinds of midwifery settings and with all kinds of different experiences, beliefs, expectations and values. It seems amazing that this group could, so quickly, become a cohesive group of women who at the end of the conference could stand, arms about each other, and sing:

"Woman am I, spirit am I  
I am the infinite within my soul  
I have no beginning  
and I have no end  
all this I am."

Women have so much strength and so many connections.

Maybe this happened because of the beautiful surroundings or the inspiring speakers or because of the rain, but we believed it happened because of the theme - Women in Partnership - which struck a chord, as together we reclaim midwifery for women.

Somebody asked us in our early planning days, "Women in partnership with whom?" It seemed obvious to us that we meant women in partnership with women. Marsden Wagner reminded us that in the

countries of the world where midwifery is a strong profession, there are also strong women's groups. This is true of New Zealand, and over the last two years it has become very obvious to midwives that we are inextricably linked to women. This is not something to fear, although some of us perhaps did fear the words - consumerism, feminism. These are words to celebrate. In fact they ensure our survival. Women who are protected in childbirth by midwives will in turn protect midwives.

This conference showed us how to remove the boundaries, lose the fear, and embrace the expanding role of the midwife. We heard from many women how they would go home with a stronger sense of midwifery, ready to share these insights with women who couldn't be there. It was also acknowledged that some women would be met at home with feelings of apprehension and anger, and we resolved to meet these feelings with understanding and love.

We have this picture in our minds of a wheel, with midwives as the hub and all the women's groups and individual women as the spokes; connected by the fact that we are women and our need for self determination; brought together through birth and new life and held together forever.

The amendment is through now, and Helen Clark has challenged us to offer women the midwifery services they want. It is up to us to meet that challenge. The future is open for midwifery, and if we hold onto our understanding of ourselves as women and continue to celebrate our connections and strengths, we will not lose ourselves as midwives and women will not lose their choices.

Together we will make the future ours. ■

## Sally Pairman, Danielle Cameron

*Sally Pairman was the conference convener, midwifery co-ordinator for the Southern Region midwifery course and Domiciliary Midwife.*

*Danielle Cameron was one of the consumer members of the conference committee. She is mother of two boys and a future Direct Entry Midwife.*



### Mini-Pill

First of all congratulations on the publication of your new newsletter. I was however disappointed to see an advertisement for the mini-pill in your newsletter. Considering that midwives promote breastfeeding it is inappropriate for this advertisement to appear.

I have included some information from the Auckland Home Birth Association booklet "A Guide to a Healthy Pregnancy" which gives the effects of the mini-pill on breast milk.

I would like to see this advertisement removed from your newsletter and a copy of the information provided included in your next newsletter. Thank you.

Marjet Pot  
Auckland

### Breastfeeding and Hormone Methods

The second paragraph reads:

"Research shows that the quality of breast-milk is affected by the hormones in the Pill: the protein, fat and mineral content are all lowered. Studies of the protein content of breastmilk of women taking contraceptive pills have found decreases in milk proteins ranging from 16% to 48%.<sup>1,2,3</sup> This decrease in protein affects the immunoglobulins.<sup>4</sup> When the milk of women on the mini pill (lynestrenol 0.5mg) was analysed for milk fats, the average decrease was 57%, compared with 16% in controls taking placebos and 41-46% in women on combined pills.<sup>2</sup> The same study showed that the levels of sodium, potassium, calcium and magnesium were greatly diminished in the milk of women taking either type of pill. (Phosphorus was diminished only in the milk of women on the mini pill.) A number of researchers have noted a marked decrease in levels of water-soluble vitamins."

### References

1. Sammour, M.C. *et al.* "Effect of Chlormadinone on the composition of human milk" *Fertility & Sterility* 24:pp301-4, 1973.
2. Kader, M. *et al.* "Clinical biochemical and experimental studies on lactation III: Biochemical changes induced in human milk by Gestogens" *Am Journal Obstet. Gynec* 105:pp978-85, 1969.
3. Hefnawi, F. *et al.* *Attempts to Select a Suitable Hormonal Contraceptive during Lactation*. Presented at the Sixth World Congress of Obstetrics & Gynecology, New York, April 12-18, 1970.
4. La Leche League Information Sheet No 18, 1975.

### Schering replies...

Thank you for the opportunity to reply to the complaint regarding our advertisement in your journal.

The use of hormonal contraceptives during breast feeding has been controversial for some time, and there is substantial

## LETTERS TO THE EDITOR

evidence that hormonal preparations containing oestrogen affect the volume and quality of breast milk.

Nevertheless, even the use of these combined preparations is not absolutely contraindicated during lactation.<sup>1</sup>

Our advertisement advertises MICROLUT (30mcg levonorgestrel) which is an alternative hormonal method of contraception for those who are not able to use preparations containing oestrogen.

Our patient information clearly states that "If you are breast feeding, your doctor should decide whether you can take MICROLUT". Additionally our data sheet correctly states that there is "... no evidence that MICROLUT diminishes the yield of breast milk".

For your members' and correspondent's information, I enclose a recent review<sup>2</sup> of the Progestogen-only pill, one section of which (pp 98-100) deals specifically with its use in lactating women.

MICROLUT (30mcg levonorgestrel) contains the lowest dose of progestogen available in a commercial preparation. In addition, it is known that less than 0.1% of the maternal dose is transferred to the infant and this is metabolised and not accumulated.<sup>3</sup>

Prolonged breast feeding itself, cannot be relied upon as a method of contraception, and adequate birth spacing is an important consideration in maternal and child health care. It is therefore not unlikely that the breast feeding mother and her practitioner will decide on a hormonal contraceptive method.

In these circumstances, we would regard MICROLUT as an eminently suitable choice.

Raewyn K. McNee  
Medical Services Executive  
Schering (NZ) Limited

### References

1. New Ethicals Compenium 1989 pp 1192-1218.
2. The Progestogen-only pill. Fotherby, K. Chap 6 in *Contraception Science and Practice* (1989) Eds M. Filshie and J. Guillebaud Butterworths pp 94-108.
3. d-Norgestrel concentrations in maternal plasma, milk, and child plasma during administration of oral contraceptives to nursing women. Nilsson S., Nygren, K.G., Johansson, E.D.B., *Gynecol* 1977; 129: 178-84.

### Midwifery Data/Consumer Survey

With reference to the article 'Midwifery data/Consumer survey' published in the NZCOM Journal No 2, March 1990, we wish to protest in the strongest possible terms to the way in which our article was altered prior to publication.

We were aware that it was possibly too long in its original form, but we would have preferred the courtesy of altering it to your requirements ourselves, or alternatively, having the opportunity to comment on your alterations. We would have been happy for the article to be published in a later journal if the alterations were done without our knowledge because of time limitations.

We did not give permission for the photograph to be used as this photograph does not depict the original group on which the article was based.

To add insult to injury, you have attributed the article to Chris Hannah, whereas the original contribution was by Rhondda Davies and Sally Pairman. Chris has discussed this with us, however, we still wish to formally make you aware of our unhappiness.

We ask that you publish an apology in the next journal and repeat publication of the article under the original authors' names. We would be happy to rewrite the article to use the same space, but better reflect the original intent. We know the next journal will be to do with our conference and we would be happy for republication to occur next year.

Rhondda Davies and  
Sally Pairman  
Dunedin

### Correction:

NZCOM Journal No 2 March 1990,  
Midwifery Data/Consumer Survey -  
Dunedin Domiciliary Midwives Report.  
Authors should read:  
Rhondda Davies and Sally Pairman

### The Editor replies...

The editorial collective wishes to convey our most sincere apologies for incorrectly attributing the authorship of your article 'Midwifery Data/Consumer Survey'.

A most unfortunate set of circumstances and misunderstanding led to this error, and we have established checks to ensure that such an error does not occur again.

We are extremely grateful to Rhondda and Sally for their support and contributions they have made to our Journal and are extremely sorry that recognition was not given for this. Please accept our unreserved apologies.

Letters continued next page

## LETTERS TO THE EDITOR

### Lay midwifery

It would appear from their letter in the last Journal that the 'lay' midwives are confused about responsibility and power.

While women having home births are expected to take responsibility for their pregnancies and births, every midwife has to take responsibility for her practice. Any midwife-registered or lay - who is not prepared to accept this responsibility is leaving the woman she cares for in the lurch.

Similarly with power. The power belongs to the woman giving birth. Therefore it surprises me that the lay midwives say that they "share their power with the woman". In fact, it is the birthing woman who 'shares power' with the midwife.

No midwife should get into the power trip - either in contention with the birthing woman or with other midwives. We should be working together in the best interests of the woman giving birth.

*Joan Donley  
Auckland*

### Congratulations

Congratulations on the second Journal. The excitement of reading the different articles and letters to the Editor has motivated me to respond to you quickly and even to make some important personal decisions.

Bronwyn Pelvin's clearly presented article on the Nurses Amendment Bill and Helen Clark's parliamentary speech were complimentary. Together they become an excellent resource!

The other articles that impressed me greatly were those written by Carolyn Young honouring Joan Donley, Julie Ashton's 'Minor Discomfort', and the report from the Dunedin Domiciliary Midwives Collective.

Midwives are obviously 'saved', alive and very active as the Journal reveals. Thanks

*Joan Barton  
Napier*

P.S. My excitement has flowed over into sending Journals to midwife friends in Australia and New Zealand and to actively encourage them to come to Dunedin for our Midwives Conference.

# Induction via Acupuncture

I recently found, during my first pregnancy, that being 'overdue' is a most tedious state to be in. The days seemed to stretch into weeks and I began to feel that my baby would never be born. My doctor started muttering about induction when I reached 42 weeks, and I found my self-confidence and faith in 'nature' fading fast.

When a midwife colleague suggested that I seek advice from a local practitioner in acupuncture and Chinese medicine, I decided to try it as I felt I had nothing to lose, and that it seemed less invasive than standard induction methods and more scientific than castor oil and hot baths. The action of 'taking charge' of the situation made for a big improvement in my mental state.

The acupuncturist was a young woman about my own age. She took a brief history

and then palpated the body pulses at my wrists. She diagnosed the problem as being in the spleen where the energy flow was very low, as the muscular strength and energy in the uterus was controlled in part by the spleen. She then proceeded to place the needles in order to stimulate the energy flow. She also burnt moxa on the needles to heat them. The sensation was one of nerve stimulation, but not painful.

I was also given instruction on diet, this included lamb curry with ginger and garlic, and kumara and pumpkin soup. That evening we reheated the acupuncture points on my legs using the moxa stick.

The next morning I awoke with slight backache. My second treatment mid morning was preceded by a show and spontaneous rupture of the membranes. By 1400hrs contractions were established and increasing in strength. My baby son was born that evening at 1850 hrs after a completely natural, drug-free labour.

P.S. The practitioner in traditional Chinese medicine was K Gascoigne of Wellington.

*Yvonne Morgan  
District Midwife - Wellington*

## MIDWIFE TO MIDWIFE

# Physiological Separation of the Placenta

Physiological separation of the placenta is something that most doctors and midwives have never seen. The mere thought of it fills them with fear and anxiety. Frequently the birth attendant in hospital is in far too much of a hurry to wait for the placenta to separate on its own, or is fearful of what will happen if an ecobolic is not given.

Clearly most women do not need a 'routine' ecobolic. There are potential dangers in receiving syntometrine when it is not needed, for example in the case of undiagnosed twins, or the rise in blood pressure that is sometimes caused by the ergometrine in syntometrine. Surely it makes more sense to assess the needs of individual women. An ecobolic (IV oxytocin or IM syntometrine) can be given with good effect, if needed, either before or after the placenta has been expelled.

In my experience when no ecobolic is given, the placenta usually appears within 20-30 minutes of the baby being born, although often it is much sooner than that. Usually the woman feels some backache or a contraction and may have a small amount of bleeding and pushes the placenta out. Often the placenta is expelled before the cord is cut, while the mother is holding the baby.

*Mary Hammonds  
Domiciliary Midwife - Auckland*

This was a part of a paper 'Study of 100 Planned Home Births' presented at the 1990 Midwives Conference.

**Midwife to Midwife- Write it Down**  
*Please share your tips and experiences with us. Jot it down and post to:  
P.O. Box 249, Palmerston North.*



Photo: Jane Scotts

## Joan Donley, O.B.E.

**T**HE NURSES AMENDMENT ACT 1990  
Date of conception - 9 Nov 1989  
Date of Birth - 22 Aug 1990  
Gestation - 41 weeks.

The passage of the Nurses Amendment Act just two days after the first National Conference of the NZCOMI will have far-reaching effects on New Zealand maternity services.

N.Z. midwives and women must be extremely indebted to the Honorable Helen Clark for her determination to 'midwife' this Bill through its various stages of labour despite opposition from a strong medical lobby, the National Council of Women which wanted to retain the doctor as 'gatekeeper', and even senior nurses and midwives in the Waikato AHB. In a letter to the Minister of Health the latter expressed "anxiety about the lack of preparedness of many midwives for the expanded role associated with independent midwifery practice.....lack of professional oversight...and of any formal auditing standards of midwifery care".

Conceived on 9 November 1989 as a two-clause Bill amending section 42 of the Nurses Act 1977, it was introduced to Parliament by Helen Clark. During its pregnancy in the Select Committee, 99 submissions were received. In reporting back from the Social Services Select Committee on 29 May 1990, Judy Keall (Glenfield), chairman of the Select Committee said that it became clear during the hearing of evidence that for registered midwives to provide "comprehensive service and to ensure the safety of mother and child it would be necessary to permit midwives to perform a range of related services".

Since these changes were outside the

# Autonomy for Midwives

powers of the Select Committee they were introduced in the form of a Supplementary Order Paper (SOP) 1.13A. The SOP made further amendments to the:

- \* Nurses Act 1977 to provide for complaints against registered midwives or allegations of professional misconduct in relation to the Social Security Act 1964 to be investigated by the Nursing Council.

- \* Social Security Act 1964, Part 11 to allow registered midwives to claim payments and refunds normally claimed by medical practitioners in respect of maternity care.

- \* Misuse of Drugs Act 1975 to allow registered midwives to prescribe pethidine and to amend the disciplinary provisions for contravention of the Act to include RMs.

- \* Medicines Act 1981 to allow RMs to prescribe medicines normally used in pregnancy.

- \* Social Security (Laboratory Diagnostic Services) Regulations 1981 to permit RMs to order a range of diagnostic tests.

- \* Medicines Regulations 1984 to provide conditions under which a RM may prescribe medicines.

- \* Area Health Board Act 1983 to allow area health boards to enter into agreements with RMs on the same terms as medical practitioners are currently accorded.

These changes will make midwives independent in practice whereas the original amendment made midwives independent in principle only.

They were vigorously opposed by the National Party with Don McKinnon (Albany) proposing an amendment to return the Bill to Select Committee where it would become stillborn. McKinnon's arguments were to "ensure and maintain the integrity, not only of this House, but of the Select Committee", but more importantly to allow further submissions from "doctors, obstetricians and gynaecologists and

other groups deemed appropriate". The amendment was lost, but the medical fraternity were given a further opportunity to appear before the Select Committee (18 July 1990). Representation from NZCOMI and NZNA was also present.

Following this, a further SOP (No 30) was introduced. This repealed s58 of the Nurses Act 1977 - authority of the MOH in relation to midwives and obstetric nurses outside of hospital boards; amended s106 of the Social Security Act 1964 to include a woman's right to have a doctor or a RM or both with all fees in respect of maternity benefits paid by the Department; s111 of the above Act added the NZCOMI as the body with the authority to negotiate fees for independent midwives with the Minister, and made the relevant changes to the following s112.

Meantime, as a result of the survey carried out by the Direct Entry Task Force and development of a draft curriculum, Carrington Polytech budgeted for a three-year direct entry midwifery course to begin in February 1991. There were more than 100 enquiries about this course. Early this year Jilleen Cole, tutor at Carrington Polytech spent three months investigating direct entry midwifery training in U.K. and Holland.

However, there was strong opposition to direct entry training from NCW, Waikato senior nurses and midwives and from the Nursing Council which had been asked to officially approve the course under s39, of the Nurses Act 1977. The Council refused its approval on both legal and 'philosophical' grounds. (The philosophical grounds are based on the Council's 'misconception' that midwifery is a post graduate course of nursing rather than a profession in its own right).

In introducing the Bill for its second reading Helen Clark made two further amendments to the Nurses Act to s39 and to s54 to allow direct entry registered midwives to practice midwifery on the same basis as other registered midwives!

The third reading followed the second reading with everybody offering congratulations on the birth of a lusty healthy baby.

Outside of Holland which has never wavered in its support of midwives, this legislation is probably a world leader in the industrialised world in restoring midwives to their proper and traditional role. This is a challenge that we cannot afford to miscarry.

Thank you to Helen Clark for her vision and determination in taking this revolutionary legislation through its stages; and to Judy Keall and Jenny Kirk (Birkenhead) for their strong Labour support. They were a great team and it has been an amazing birth. The midwives and women of New Zealand salute you!

BOWRON

# Babycare® Lambskins

## What the Experts Found when they Tested Babycare

A 1983 project on very low birth weight babies nursed on lambswool fleeces carried out by the Child Care and Development Group at Cambridge University discovered that:

- Very low birth-weight babies made significant weight gains
- Babies on fleeces settled more quickly and cried less
- Natural wool was superior to artificial fleeces which shed fibres, had poor texture and made the child damp
- Parent/baby bonding was enhanced
- Lambskin encourages tactile stimulation so necessary for baby's growth and development

“In addition to this hospital-based study on premature babies, we conducted a pilot study on normal term infants at home.

All the mothers kept their babies on the lambswool for at least 12 hours a day demonstrating the acceptability of this kind of bedding, and the indications were that when compared with controls these babies cried less, settled more quickly to sleep after feeds, and lay quietly attentive for longer before feeds.”

“No untoward effects from being nursed on lambswool were observed. In particular, no baby was found with wool fibres in its mouth or up its nostrils. No mother expressed dissatisfaction that her baby was being nursed on lambswool and a number of the control group asked why their babies were not on it.”

“The results consistently show a significant improvement of weight gain for babies nursed on lambswool. We have previously speculated that the contact provided by lambswool may have a calming effect on infants similar to that seen with swaddling. The present results would be compatible with the idea that when nursed on cotton, these babies are under some stress which is reduced by lambswool.”

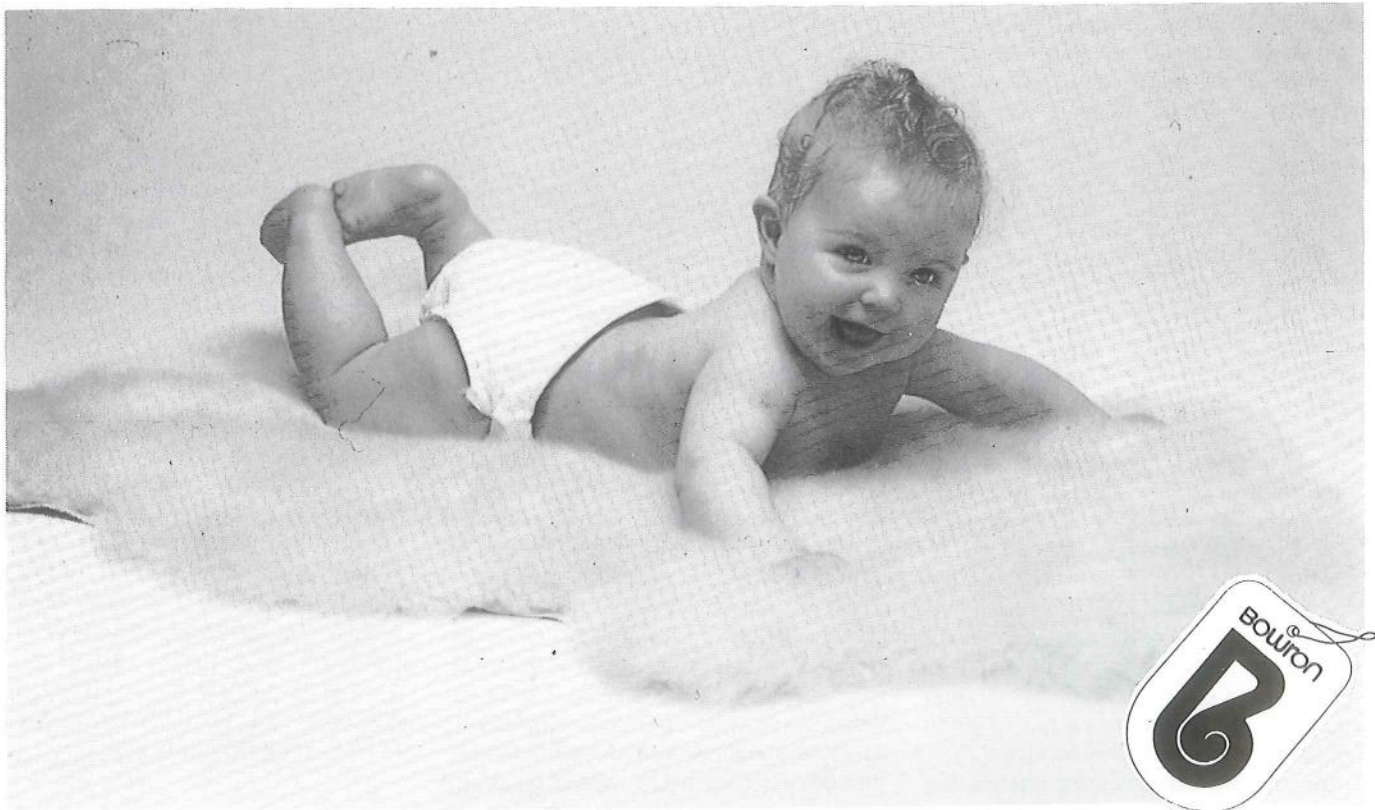
“We have had some experience in the unit with artificial fibre, imitation wool mats. The ones we have seen have an altogether different slippery texture compared with wool and the skin of babies lying on them often becomes damp as the artificial rugs do not absorb moisture for evaporation.”

Scott, S., Richards, M.—Nursing Low-Birthweight babies on lambswool. *Lancet* 1979; 1:1028—Lambswool is safer for babies. *Lancet* 1981; 1:556

Babycare lambskins have been tested by leading authorities around the world.

- Bowron Babycare has been found to be hypo-allergenic and non-toxic to babies.
- Bowron Babycare lambskins have a natural resistance to fire, and exceed all requirements of the Flammable Fabrics Act.
- Bowron's Supersoft tanning process uses the safe mineral tannage method of trivalent chrome compounds, specifically developed to avoid using the harmful hexavalent chrome and formaldehyde tannages.
- Bowron Babycare processing takes longer than other methods, but achieves the high requirements for washability and resistance against bacteria.

For more detailed information write to:  
G. L. Bowron & Co. Ltd  
P.O. Box 19544  
Christchurch or phone (03) 842-609





# Women in Partnership

## Report from the 1990 Midwives Conference

Karen Guilliland, Julie Hassen

**W**HAT A REMARKABLE YEAR FOR midwifery! This has been achieved by a remarkable collection of women and midwives working together for social change.

The Conference had an air of celebration, warmth and an overwhelming sense of the 'power of partnership'. Karen Guilliland welcomed participants, reflected on the beginnings of the College, and stated that the foundation of this was built on the fundamental belief that the relationship between midwife and woman is one of partnership. The College is the first professional group to include the people for whom we provide the service in policy and decision making at all levels.

Keynote speaker, Dr Marsden Wagner gave his first paper titled: "Medical Reactions to Midwife Autonomy". He outlined the enormous world-wide struggle over freedom, power, and control of health care, in particular, in the maternity services. He identified two models in conflict, that of the medical model promoted by the medical profession and the social model promoted by a disparate group of people including midwives, social scientists, epidemiologists and women's organisations.

He illustrated how the medical model is often based on the assumption that medical intervention guarantees better "outcomes", and how the social model puts forward the following point to emphasise social factors which determine "outcomes".

*"In more developed countries the factor most commonly associated with the death of a baby around the time of birth (perinatal mortality) is low birth weight (under 2500g). There is no really effective medical intervention to prevent low birth weight. The only factors proved to be associated with low birth weight are social: lack of social and emotional support, smoking and substance abuse."*

It's interesting to note here that New Zealand's low birth weight rate has not changed in 20 years in spite of the increased use of ultrasound to diagnose it.

Helen Clark was welcomed to the Conference by a standing ovation from all two hundred women present.

Her speech reaffirmed her belief in women's choices and midwives as autonomous practitioners, promising the Nurses Amendment Bill will be passed before Parliament rises in three weeks time. Another feature of her speech was commitment to promote direct entry education for midwives.

*"I know there is interest in the Polytech-*

*tics in running pilot direct entry courses. A recent application along these lines to the Nursing Council had no joy. If the Nursing Council is inhibited by existing legislation, that can be changed. But I have to say that I would be concerned if legislative barriers were removed and still no tolerance for an experimental programme followed by full registration was shown. Certainly that opens up the question whether the Nursing Council is the appropriate body to govern midwifery. Objections to direct entry Midwifery appear to me to be doctrinally and not empirically based."*

Helen Clark and the Select Committee introduced the Bill into the House for its second and third reading four days later and midwifery autonomy became law. Women and partnership at its best!

After a very stimulating, comprehensive programme of speakers and workshops, Joan Donley presented the last paper "Where to now for Midwifery?" As she had two years ago in Auckland, Joan laid down a challenge for midwives, this time to use the proposed independence of midwives as a means to make real changes to the present maternity service and the outcome of women's pregnancies. Joan presented ways by which this could be done with particular emphasis on education within the community and the profession.

Joan also addressed the issue of accountability and our need for indemnity insurance, particularly with the expansion of our professional role and profile. Joan stressed that there was no time to rest, and that to ensure appropriate changes to the present service, midwives must be involved at every stage of the process.

The Conference closed amidst thank you's, gift giving and song. It was a timely gathering to celebrate our achievements over the last few years. Marsden Wagner had sped through New Zealand challenging the establishment and inspiring midwives. The aftermath of his outspoken warnings against unnecessary intervention and New Zealand's alarming operative delivery rates are still being felt. Many health professionals and administrators have taken his warnings to heart and change is, hopefully, to be the result. Midwives certainly have gained strength from the knowledge and networks made at Conference.

Now autonomy is a reality, it is conferences like this which increase our commitment to midwifery.

Roll on Wellington, 1992.

# Appropriate Technology For Birth

*August 1990, Dunedin NZ*

**Marsden Wagner**

*World Health Organisation's  
Director of Perinatal Health Care Services:  
European region.*

**T**HERE IS PROBABLY NO BETTER INDICATOR of the approach that is taken to birth than the way in which technology is used at the time of birth. Consequently, as might be expected, supporters of the medical model of birth and supporters of the social model of birth hold widely different views of birth technology. In the medical model, a reliance on technology is the natural outgrowth of the mechanistic view of the body. The body is a complex, rather imperfect machine whose efficiency can be improved by other machinery. It is important to react to signals from, or information about the body, but those reported by the patient are subjective and qualitative. Machines, which relay quantitative and objective information directly from the body, are more reliable.


The social model presents a contrasting set of beliefs. According to the social model, a crucial ethical and practical dilemma at present is an uncertainty about the nature of technology, its real benefits and hazards, and the extent to which people are able to make informed choices about how and where technology may influence and dominate the structure of everyday life.

The social approach to technology is to focus on making it appropriate, recognising that the people who define appropriateness control the technology. In general, this means technology that is simple, inexpensive, capable of use in the clinic or home, preferably non-invasive and always socially and psychologically acceptable. A fundamental principle of this use of technology is, first to do no harm - one of the ancient cornerstones of physicians' practice.

Just as subscribers to the medical model, in distrusting the body, demand more evaluation (diagnostic tests) of it, so users of the social model, in distrusting technology, demand more examination of technology. Both epidemiology and the social sciences are increasingly employed for this purpose. Evaluations using these methods have supplied no real evidence that the birth technology is actually responsible for much of the decrease in the numbers of babies and women dying around the time of birth.

To advertise any remedy or operation, you only have to pick out all the most reassuring advances made by civilisation, and boldly present the two in relation to cause and effect: the public will swallow the fallacy without a wry face. It has no idea of the need for what is called a controlled experiment.

The best scientific data show that the most important causes of the falling perinatal and maternal mortality rates are not medical but social. These causes include: better nutrition, better general health for women, better housing, and reductions in the number of children for each woman,



the number of children born to very young and very old women, and the number of unwanted children. The claims of the medical model for the success of the birth technology have convinced the public and its representatives to continue pouring more and more resources into medical services for infants and women during pregnancy and birth, at the expense of the more important social services. Unfortunately, this tendency to develop and support systems of care for birth, based on the unquestioning acceptance of advice from the medical profession, is nothing new.

When considering birth technology it is extremely important to remember that using technology at birth is different than using technology in other medical situations, since birth is not an illness. Indeed it is important, as is the case with all medical care, to follow the principal - first do no harm.

Since all technology including perinatal technology is associated with doing something (as opposed to doing nothing), technology is associated with intervention. Kloosterman, Professor of Obstetrics from the Netherlands, described the issue of doing something versus doing nothing in the perinatal period when he said that

*"spontaneous labour in a healthy woman is an event marked by a number of processes which are so complex and so perfectly attuned to each other that any interference will only detract from their optimal character - the doctor always on the look-out for pathology, and eager to interfere, will much too often change the physiological aspects of human reproduction into pathology (1)."*

When this happens, such complications may be, and often are, interpreted as justification for the original technological intervention rather than as the undesired result of it. With regard to doing something or doing nothing, I really like the definition of midwifery which says: "A midwife is someone with good hands, and knows how to sit on them."

In medicine, we are certainly trained in the philosophy "don't stand there - do something". We are also judged by what we do much more than what we do not do. We doctors are not only judged by the number of our actions, but also by the level of sophistication of the equipment we use. I can assure you that in my travels with WHO, whenever I visit a hospital, I am first taken to see their latest equipment and technology.

The methodologies for the basic assessment of technologies, including perinatal technologies, use the clinical approach

and focus first on the efficacy of the technology to solve the immediate problem for which it is applied. In other words, clinicians want to know "does it work?" Also part of the basic methodology for technology assessment is an assessment of its safety but this has been done far less in clinical assessments because generally speaking clinicians are more concerned with efficacy than they are with the risks that might come from using this technology. In addition to assessing efficacy and risk, it is also part of the basic methodology to assess what is called the cost benefit. These together then make up the basic

*"A midwife is  
someone with  
good hands and  
knows how  
to sit on them"*

methodologies.

Broadening this perspective can allow for addressing at least five ramifications of perinatal technology use which are rarely assessed using the orthodox methodologies.

The first ramification of technology application which rarely is assessed is the impact on the skills of the providers of care. The widespread application of electronic fetal monitoring has undoubtedly reduced the levels of competence of the caregivers to auscultate the fetal heart. No competent cardiologist would be satisfied only to look at the electrocardiogram trace in assessing a patient without also carefully auscultating the heart. Yet in obstetrics there is a tendency today to rely more and more on the monitor's tracings alone. So the clinical skills in auscultating and identifying variations in quality of fetal heart tones is lost. Another example is the loss of the obstetricians' skill in assisting at vaginal breech birth. I have been told more than once that one of the justifications for always doing caesarean section with breech presentations is that there is no one in the hospital with enough experience in assisting at vaginal breech births.

A second ramification of perinatal technology use which is rarely considered is the way in which the technology influences the system of perinatal care delivery. This is clearly illustrated by the recent trend for more and more routine antenatal care to be provided in a hospital setting because that is where the technology is located. Antenatal care is moved from the primary health care setting to the secondary and tertiary health care setting and

this move can have important consequences on the quality and nature of the care provided. When assessing an individual technology it is important to evaluate its impact on both the system of care and the skill of the care providers.

A third rarely-evaluated ramification of technology is the impact of the technology on subsequent events during pregnancy and/or birth. It is slowly becoming increasingly clear that there is a tendency toward a cascading effect of technologies. This means that the application of one technology leads to the subsequent application of other technologies. This cascade effect was mentioned and diagrammed in "Having a baby in Europe"<sup>(3)</sup>. Perinatal technology assessment should therefore always include looking at these subsequent events.

A fourth ramification of technology which is not assessed frequently enough is its psychological and social impact. A lengthy literature review of perinatal routines commissioned by the World Health Organization illustrated how infrequently the psychosocial consequences of routine procedures was assessed (2). For example, in a 10-year period over 500 papers were published on electronic foetal monitoring, of which only two papers considered the viewpoint of the birthing woman. Assessment should include not only how the woman feels about the technology as it is applied to her, but also how it may affect her feelings about the pregnancy, the infant and herself in the future.

A fifth ramification of technology is the ethical implications. Today we find ourselves in the extraordinary situation where the concern is often whether or not it is unethical not to use the technology, rather than whether or not it is ethical to use it. In the perinatal technology field there is an urgent need to address the question, "What is the balance between the ethics of withholding a technology which may be beneficial, and the ethics of using a technology which has not been adequately assessed for efficacy or safety and therefore may be useless or dangerous?" It might be fair to say that to date perinatal technology assessment has raised more ethical issues than it has solved. This situation demands that the ethical ramifications of any technology be carefully included in any assessment.

I believe that every country should have a system for evaluating national perinatal epidemiology information. In addition, every country needs an office of technology assessment which will carefully evaluate in the way described above, all

Continued on Page 14



**1990 Conference Photos**

*(Clockwise from top left)*

- \* 1990 Conference organising committee.
- \* Conference banner
- \* Witches or midwives?
- \* NCCOM outgoing Board of Management





\* Some of the Australian contingent

\* Marsden Wagner chats to Betty Jenkins

\* Rhondda Davies/  
Beverly Henderson;  
Dunedin

\* Kathy Glass, Jenny  
Burnham,  
New Plymouth/  
Pat Irvine, Rangiora.

\* Karen Guilliland, President  
NZCOM, with Helen  
Clark, Minister of  
Health (and honorary  
midwife)

*photos: Glenda Stimpson,  
Auckland.*



## Appropriate Technology For Birth (Cont.)

new and ongoing technologies. This is certainly particularly true with regard to perinatal technologies. In most countries in the world you cannot invent a new drug and immediately start to use it on patients without careful assessment. On the other hand, in almost every country in the world you can invent a new machine and start using it the next day without any prior assessment.

I would now like to discuss the use of birth technology in New Zealand.

First we will discuss operative birth in New Zealand. You can see from the table that the caesarean section rate varies widely but in the main is somewhere between 10-20% with an average perhaps around 15%. This would certainly be considered the high borderline that would be permissible in any developed country and I would therefore say that New Zealand's caesarean section rate should not go up at all, but hopefully would be coming down. The WHO recommendations state: "Countries with some of the lowest perinatal mortality rates in the world have caesarean section rates under 10%. Clearly there is no justification in any specific geographic region to have more than 10-15% caesarean section births."

Next is operative vaginal births by which we mean forceps or vacuum extraction. Here I believe we have the single most important problem in New Zealand's perinatal epidemiology. You can see from the table that there is a wide variation in the use of operative vaginal birth but that again it ranges mainly between 10-20% with an average perhaps around 12-15%. This is at least double what it should be and I refer you to page 20 of the publication "Having a baby in Europe" (3) where you can see the operative vaginal rates that with the exception of three countries are all far below 10% and many of them below 5%.

So you are doing perhaps twice as many operative vaginal births as is necessary. Beyond this is an equally urgent problem in that you are doing almost entirely forceps rather than vacuum. There are a number of careful scientific studies in the literature which make it quite clear that the vacuum extractor is preferable to forceps. I refer you for example to the May 1989 issue of the British Journal of Obstetrics and Gynaecology where there is excellent data on this subject. In fact, using the data from this particular journal, it is possible to make some estimates of the excessive maternal morbidity which New Zealand women are suffering every year because you are using forceps rather than the vacuum extractor. Thus, since New Zealand has approximately 58,000 births a

year and the present forceps rate is approximately 15%, then forceps are used in approximately 8,700 births a year in New Zealand. Extrapolation of data from studies of the maternal morbidity of forceps compared to vacuum extractor shows that the continued use in New Zealand of forceps as the instrument of first choice results every year in:

- 2,100 unnecessary pudental blocks or other forms of regional anaesthesia for delivery;

- 1,700 unnecessarily experiencing moderate or severe pain during child birth;

- 900 more women with severe perineal or vaginal trauma than they need be, and

- 600 women suffering unnecessarily from severe pain for several days after delivery.

The only justification for accepting preventable maternal morbidity on this scale would be good evidence that forceps had some compensating advantages for either women or their babies. So far no evidence of such an advantage has been detected in the available studies. In addition, I would like to point out that when one combines

**New Zealand  
Operative Births in per cent (1989)  
Unofficial figures obtained from hospital records**

	C-Section	Operative vaginal	Total
Home birth	3.7	1.4	5.1
Wellington Women's	15.5	14.5	30.0
Masterton	11.6	NA	NA
Middlemore	8.8	5.4	14.2
National Women's	15.7	12.1	27.8
St Helens	13.8	12.3	26.1
Waikato	14.9	11.0	25.9
Taranaki area	13.5	9.0	22.5
Hastings	8.4	23.0	31.4
Napier	11.6	20.0	31.6
Palmerston North	19.0	8.3	27.3
Nelson	11.3	18.0	29.3
Christchurch Women's	22.0	15.0	37.0
Queen Mary Dunedin	16.3	14.3	30.6
Dannevirke	7.0	12.0	19.0

**New Zealand  
Epidural rate in per cent (1989)**

Home	0
Wellington Women's	40.6
Masterton	10.9
Middlemore	20.0
National Women's	30.0
St Helens	29.0 (including elective c-section)
Waikato	25.0
Taranaki area	9.0
Hastings	22.5
Napier	22.6
Palmerston North	31.0 (including c-section)
Christchurch Women's	37.0
Queen Mary	31.5 (19.9% for pain and 11.6% for operative birth)
Dannevirke	3.0

the operative vaginal rates in the New Zealand with the caesarean section rates, one can determine for each hospital the overall operative birth rate. You will see that in general in New Zealand hospitals the overall operative birth rate tends to run between 25-30%. In other words, generally speaking over one quarter of all New Zealand women have their baby either cut out or pulled out. These rates are at least double those in most European countries.

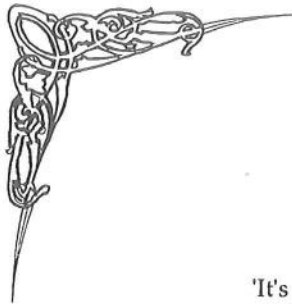
In summary then it is clear that there is far too much technology being used at the time of birth in New Zealand and that it is creating definite problems.

It was very tempting while putting this data together to attempt to see if there was a correlation between the frequency with which midwives were the birth attendants and the level of technology use. I must say that my general impression was that in those hospitals where there were the most use of midwives, there were in general lower intervention rates but this certainly is not a scientific statement and indeed such a comparison would need to control for the percentage of births in the hospital which are complicated.

Midwives appear to be working in places that focus on what the obstetricians call low-risk women and the obstetricians are attending high-risk women. As a result obstetricians will, of course, need to use more interventions. Nevertheless, as I have said earlier, I believe there is some data worldwide, to suggest that one of the most important ways to bring birth technology to appropriate levels of use is to expand the autonomy of midwives. My own working hypothesis is that the amount of birth technology used is inversely related to the strength and autonomy of the midwifery profession, and to the distance between the normal pregnant and birthing woman and obstetricians. So the midwives of New Zealand have a very important role to play in the future in bringing birth technology into appropriate use and one of the first ways to begin this effort is to begin a broad public discussion of the present use of these various technologies in your country.

#### References

- (1) Kloosterman, G.L. quoted in *Obstetric Delivery Today* by Peter Dunn, *Lancet*, April 10 1976
- (2) Fraser, C. Selected perinatal procedures: Scientific basis for use and psycho-social effects. A literature review. *Acta-Obstetrica et Gynecologica Scandinavica*. Supplement 117, 1983
- (3) World Health Organisation. *Having a Baby in Europe*, WHO, Denmark 1985



## MIDWIFE

'It's time' one of us  
breathes into the phone-  
but she knows, she's already  
here putting down  
her bag of mysteries  
(oxygen mask? forceps?)

and the chief performer,  
first violin, the star,  
takes her position;  
as for the rest of us,  
well, we know a maestro  
when we see one -

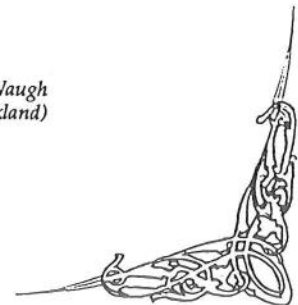
she's the one with the  
supple wrist; easy,  
precise, she coaxes us  
into our parts,  
we'd follow her anywhere  
- when she's ready

for us to move forward,  
aside, we know  
by a particular intentness  
of fingers and face  
that draws us in to the  
whole resonant magic:

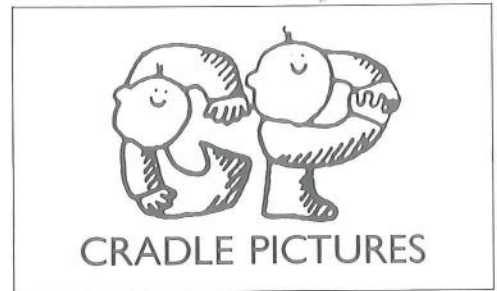
and then we're there - all,  
even the extras,  
have come to a brilliant  
finale. She steps down,  
congratulating the lead  
(there are two of them now),

us too - and yes thank you  
she will have a glass  
of champagne - as though  
she's done nothing  
special. Now that's skill.  
That's style.

*Poem written for Heather Waugh  
(Domiciliary Midwife, Auckland)  
by Lauris Edmonds.*



Telephone 457-562  
P.O. Box 33-344  
Takapuna, Auckland.



# WE HELP YOU REMEMBER THE JOY OF TODAY, FOREVER!



Our professional photographers will capture your baby's precious first days — something to treasure forever.

We visit the Hospital every Monday, Wednesday and Friday.

Our beautiful package is sent to your home for you to view at your leisure for 14 days. No payment is required until you decide to purchase all or part of the pack;

or you may simply return the whole pack to us, and no charge will be made.

We look forward to being of service to you.

Thankyou,  
**CRADLE PICTURES**





Photo: Glenda Stimpson

# The Domino Birthing Option

**Lynley McFarland**

(Domiciliary Midwife, Whangarei)

IT IS ENORMOUSLY REWARDING TO SUPPORT a woman you know throughout her birthing experience. Domiciliary Midwives throughout New Zealand are addicted to the rewards of this way of working despite the lower financial return.

The basis for practice is a pride in maintaining one's standards of practice, and a commitment to each woman, to provide her with a professional service. This direct, highly visible, contractual arrangement between a woman and a midwife, requires that a midwife be flexible, knowledgeable and always open to new challenges of learning and relating to women. My commitment is to meet the individual needs of each woman.

Last year the Domino option was started at Northland Base Hospital on trial for one year. Dom-in-o means *domiciliary* midwife *in* and *out*. It is a borrowed English term. The domiciliary midwife sees a woman antenatally and in early labour at home. The active part of labour, the birth, and up to 8 hours after the birth happens in the hospital labour room. Sometimes the postnatal stay is overnight if the birth occurs late in the afternoon or evening. Some women are keen to get home as soon as possible and others do not want to take a new baby out in the night temperatures. If a woman or baby requires further in-hospital care, they are transferred into the hospital system and the domiciliary midwife takes up their care on discharge.

This option became possible due to:

- a. The pressure of society to improve women's health.
- b. The reduction of postnatal beds in Northland Base Hospital following bed occupancy review.
- c. The innovative attitudes of hospital management and nursing staff.
- d. The pressure from consumers and the obligation of the Auckland Hospital Board to meet community needs at the recommendation of the Women's Service Development Group.

## Criteria for Acceptance

The only limiting factor for entering the Domino option was the likelihood of the woman being able to leave from the Delivery suite within the time frame. Reasons that a woman might not be suitable for the Domino option are:

- Diabetes.
- Hypertension in pregnancy, severe enough to require antenatal admission for rest.
- Elective caesarian section.

Continued next page

### Payment

The same rate is paid to the domiciliary midwife for both Home Birth and Domino options. It is possible to be available for both options. The contract is with the Minister of Health, who pays for all services provided in the woman's home. An individually negotiated contract with the Auckland Hospital Board pays for the hospital care.

While there are numerous options possible, it is difficult to work under the current award and provide a 24 hour 7 day a week service, with an unpredictable workload. There are two of us working this way. We cover for each other for time out, for relief when a labour is long or when there are consecutive labours. If either midwife needs to take up casual work at the hospital to maintain an income, the other will guarantee to cover that shift if she needs to leave for a labour. In practice, the thought of being on call is far worse than reality. I try to give advance notice of my holidays so that women can take responsibility for meeting the other midwife.

Goals and strategies were developed from

the following beliefs:

1. That continuity of care reduces intervention.
2. For low risk women, a woman's own home is a more appropriate place to develop parenting and problem solving skills.
3. A good birth experience increases a women's self esteem and is an important aspect of the ongoing parenting relationship.

The outcomes are being collected in two ways:

1. A presentation of the clinical results.
2. An AHB survey of consumer satisfaction which has not yet been completed.

### Cost

The Northland Area Health Board paid the domiciliary midwives \$16,340 for the hours of labour and the birth attendance in hospital for 70 births, that is \$225 for the first 6 hours and \$37.50 for each hour thereafter. Two thirds of Domino births

occurred within 6 hours. The longest claim was for 17 hours. While a direct comparison cannot be made between these figures and hospital staffing costs, it is interesting to note that if the total cost of staff per annum is divided by the number of births at our hospital, the cost for 70 births would be \$28,332; that is 13 full time equivalent midwives and 2 full time equivalent senior enrolled nurses for 1400 births per annum.

### The Future

Now that midwives have access to hospital beds and fees, in the same way that Medical Practitioners do, there is scope to broaden independent practice to include women who choose to have Postnatal care within the hospital.

In smaller areas like Whangarei, it is difficult to have consistent income and workload from Home Births or Domino alone. The changes to the law will make it easier for more midwives to make a viable income in independent practice. ■

## The First 70 Domino Births in Whangarei August 1989 - July 1990

### Type of Delivery

	<u>Number</u>	<u>Per cent</u>
Normal delivery	65	92.8%
Ventouse assisted	3	4.3%
Caesarean section	2	2.8%
Total births	70	

### Parity

	<u>Number</u>
Primipara	20
Multipara	50
Total	70

### Analgesics used

	<u>Per cent</u>
Sublimaze (Fentanyl)	10.0%
Pthiclone	7.0%
Epidural anaesthetic	2.8%

### Perineal repair required

	<u>Per cent</u>
Episiotomy	2.8%
Sutured laceration	30.0%
Total repairs	32.8%

### Positions for giving birth in order of most common use:

- Kneeling
- Birthing stool
- Sitting
- Hands and knees
- Squatting
- Standing
- Dorsal, Lithotomy, lateral



# Ultrasound use in New Zealand

Joan Donley

Domiciliary midwife - Auckland

ULTRASOUND IS SONIC RADIATION (AS opposed to isotopic radiation of X-ray). A product of warfare, it was developed during World War I to detect submarines. Developed for obstetrics by Professor Ian Donald of Glasgow in the 1950s, by 1968 it was becoming a popular method of determining the growth of the fetus hiding in the amniotic fluid like a submarine skulking on the ocean floor. (Oakley)

Ultrasound is sound waves at frequencies over 20,000 per second - above the range of human hearing. The higher the frequency, the greater the power. Diagnostic ultrasound is done at a frequency range of 1 - 10 mega hertz (MHz). The irradiation (exposure) may be continuous (Doppler) or pulsed (imaging).

A pulse generator passes a high voltage alternating current through a piezoelectric crystal, causing it to vibrate and emit ultrasound pulses. These are formed into a beam which penetrates the area interface.

In New Zealand diagnostic ultrasound in pregnancy was in use from 1973. Radiologist J.H. Stewart reported 20 to 30 scans per day at National Women's Hospital (NWH) with the number rising. However, the Maternity Services Committee Report, 1976, *Maternity Services in New Zealand* (Bonham and Mackay) expressed some uncertainty about "the final place of ultrasound scanning as an alternative to radiology, particularly for the diagnosis of twins, placenta praevia and fetal head growth" (15.4).

By 1980 N.Z. doctors were recommending that all pregnant women should be routinely scanned at 20 weeks "as a matter of course". Dr Florence Fraser, an obstetrician at NWH specialising in ultrasound took issue with this saying, "It cuts out use of brains, hands and clinical skills and reduces patient contact" (Star 14.6.80). She said that several abnormalities would not show up at 20 weeks and even if several scans were done, it would not guarantee a healthy baby. The two ultrasound scanners at NWH were in use most of the day, she reported.

By 1982 Professor Bonham was recommending "routine echogram at 16 weeks". This decision was reflected in the 1985 Department of Health, Division of Health Promotion handbook for pregnant women entitled *Your Pregnancy*.

This advised women that the baby's heart starts beating early in pregnancy and this can be detected by an ultrasound machine and the movements displayed on a TV-type screen (p 18). It also said "...These scans are used quite frequently to find out the position of the baby and of the placenta (afterbirth). They are also used to check the baby's age if there is doubt about dates and to make sure the baby is growing

normally....It's often done at 16-17 weeks....Most mothers find that they enjoy seeing the baby and having the test done" (p 26).

Today, 1989/90 most women are subjected to two routine ultrasound scans during a pregnancy. Those seen to be 'high risk' get extras. There has been considerable consumer resistance to this indiscriminate use of scans - enough to worry the doctors. Kevin Pringle, Wellington paediatric surgeon, is quoted in NZWW (9 Oct 1989) that "if attitudes towards ultrasound scans don't change, New Zealand will quickly be practising Third World medicine" - meaning an increase in perinatal and infant mortality.

The high rate of infant (and maternal) mortality in the Third World has nothing to do with lack of high technology. It's a direct result of the poverty caused by our Western world greedy exploitation of the Third World. In fact, here in Godzone, the women at the bottom of the socioeconomic heap, the ones at high risk who get all the extra scans, are the ones with the high perinatal mortality rates. The middle class women who have better food, housing and fewer or no scans have a lower PNMR.

While recommending routine scans for all, Pringle admits that "nobody using these machines can confidently say they are absolutely safe" and "I can't guarantee that in 40 or 50 years there is not going to be a price to pay for antenatal ultrasound in a small group of people".

Part of the consumer resistance to scans in the Wellington area is blamed on a group of senior midwives who had an information sheet on scans produced, accompanied by an area health board directive that informed consent should be clearly obtained. Two of those midwives were made redundant when the Board was restructured. The professor wrote, "I believe their philosophy embraces not only radical feminism but also misogyny" (misogyny is hatred of discussion and knowledge!).

Currently a three-year study on the use of ultrasound in pregnancy is being carried out by Associate Professor Gerald Duff of Christchurch Women's Hospital. It is funded (\$60,000) by the Foundation for the Newborn. Duff believes that we use too much technology. He feels that the money might be better spent on Maori and Pacific Island health rather than on expensive high technology machines and staff to use them (Christchurch Press, 10 Aug 1988).

#### Is It Safe?

To date no evidence has been produced that ultrasound in obstetrics is safe. On the contrary, there have been numerous research trials which have shown deleterious bioeffects of scans serious enough to merit further investigation. It is significant that this further investigation has not been

carried out. This enables those advocating ultrasound to say there is "no proven hazard".

However, the routine use of ultrasound in obstetrics has been cautioned against by the American College of Obstetrics & Gynecology (hardly a radical body); by WHO and by the U.K. National Health Service and National Institute of Health. This caution is based on doubts expressed by numerous official and scientific bodies.<sup>1,2,3,4,5,6,7,8</sup>

### *The ultrasound market is "among the fastest growing medical instrumentation market of all times"*

**Does Ultrasound Effectively Improve/Change Management of Pregnancy?** The short answer is 'no', from the few studies that have been carried out.

A report of a British Institute of Radiology Working Group, 1987, mentions two trials<sup>9</sup> aimed primarily at determining the benefit of ultrasound screening in pregnancy from the point of view of clinical outcome. The conclusion was that neither trial revealed anything better than marginal benefits.

A study published in the *N.Z. Medical Journal* (28 Oct 1981) found that measurement of the fetal biparietal diameter by ultrasound is not an accurate method of detecting fetal growth retardation. A more recent (1989) U.S. study concluded that gestational age based on good menstrual records, supported by a pelvic examination in the first trimester may be more reliable than even the best ultrasound method for dating.<sup>10</sup>

Mothers who have had scans report a mean increase of 90% in the number of fetal movements during exposure.<sup>11</sup>

A study reported in *Obstetrics & Gynaecology*, vol 67, no 3, p 352, noted an incidence of spontaneous abortion of 2.3% in women after a normal first trimester scan to determine gestational age. The risk of spontaneous abortion increased with maternal age for example:

less than 30 years	1.4%
30-34 years	2.6%
35 years and over	4.3%

#### Cost

In view of the fact that the obstetric value of ultrasound is 'marginal', its therapeutic utility 'slight' and its cost disproportionate, why is there such a campaign to routinely scan all pregnant women as often as possible?

The answer is, of course, money. Ultrasound monitoring was a million dollar

industry a decade ago - with one British firm selling 800 machines worth £2 million in one year.<sup>12</sup> The manufacturers involved were among the most generous supporters of both research into fetal physiology and of international conferences on the same topic.<sup>13</sup> They were also alleged to have funded a pressure group which attacked the home birth movement.<sup>14</sup>

The ultrasound market is 'among the fastest growing medical instrumentation market of all times', growing at an annual rate of 16%. It is used most intensively in countries with insurance-based health care systems<sup>15</sup> - like N.Z. According to the Auckland Area Health Board the capital cost of a scanner (1989) was \$170,000. Cost per scan is \$70 + GST.

The sociologist J.B. McKinlay argues that "...the success of an innovation has little to do with its intrinsic worth (whether it is measurably effective as determined by controlled experimentation) but is dependent upon the power of the interests that sponsor and maintain it, despite the absence or inadequacy of empirical support. The power of such interests is also evident in their ability to impede the development of alternative practices (for which there may also be considerable observational support) that could conceivably threaten an activity in which there is already considerable investment."<sup>16</sup>

#### Electronic Fetal Heart Monitoring (EFHM)

EFHM is achieved by continuous ultrasonic beam. Where pulsed ultrasound uses one piezo crystal, there are two involved in continuous ultrasound - one sends out the vibration, while the second picks up the echo. The echo is then amplified electronically and can be recorded on a graph.<sup>17</sup>

This form of ultrasound is referred to as doppler (after the Austrian physicist Christian Doppler). Most dopplers (doptones, sonicaids) operate at a frequency of about two million vibrations per second. Because it is continuous, the energy level is more than 100 times higher than in the pulsed ultrasound.<sup>18</sup>

Sonicaids are used to monitor the fetal heart rate. They soon became standard equipment in antenatal clinics, doctors' surgeries and in labour wards, replacing the traditional method of auscultation using a pinnard. While any idiot can flick a switch and move the transducer around until the fetal heart is picked up, use of a pinnard requires development of clinical skills.

Unfortunately, women are encouraged to choose use of the sonicaid so they can hear their baby's heartbeating. What most women fail to realise is that the EFHM allows the medical technocrat to monitor the fetus (referred to as the passenger) without touching or even talking to the mother (known as the vehicle), that is, it places control of the fetus into the hands of

the technician and undermines the role of the mother. In some cases it can also create anxiety.

As well as the one-off monitoring of fetal wellbeing, EFHM is frequently used on a continuous basis during labour and antenatally in the non-stress test (NST) and the contraction stress test.

The NST is used from 32 weeks gestation on women considered to be 'high risk' to assess placental function and the potential ability of the fetal heart rate is recorded in relation to changes in rate during a Braxton-Hicks contraction and/or fetal activity. A rise of 15 beats (or more) per minute over the normal (120-160) is regarded as 'reactive'.

The mother, sitting semi-upright, has a transducer strapped to her abdomen (fundus) to record her contractions. Another transducer is strapped lower down over the fetal heart. The results are recorded on a graph over a period of 10-20 minutes. If the fetus is sleeping, it needs to be prodded. Carried out twice weekly, it is not diagnostic in itself and is seen as an indication for further testing, for example the more time-consuming contraction stress test or a 'fetal biophysical profile'. In fact, a 1988 (U.S.) study said, "most nonreactive non-stress tests are clearly not associated with fetal compromise".<sup>19</sup> Seventeen nonreactive NSTs were followed by positive results on follow-up testing. Since, "in most cases intervention on the basis of a nonreactive nonstress test alone is inappropriate",<sup>19</sup> what is the point? The answer is that "they may be useful as a teaching exercise, especially for midwifery staff, junior medical staff and medical students"<sup>20</sup>

In 1984 the estimated cost of this cardiocotograph was the same "as a small car"<sup>21</sup> - \$11,000-\$13,000 compared to \$700 for a hand-held doppler or \$20 for a stethoscope<sup>22</sup>

EFHM during labour can be either periodic or continuous and external or internal (invasive). Continuous testing is internal. Whatever method is used, it limits a woman's freedom of movement, focuses the attention on the print-out, minimises personal interaction and undermines a woman's role and status in the birthing process.

Preconditions for internal EFHM are ruptured membranes and sufficient dilatation of the cervix to allow passage of a catheter into the uterus to monitor contractions and permit a fetal scalp electrode to be screwed into the fetal scalp. The external one is similar to the arrangement for NST - two wide straps around the abdomen.



EFHM was introduced without evaluation at a time when it was found that one of the three major causes of perinatal death was fetal hypoxia (lack of oxygen). It quickly became standard procedure to monitor *all* women in labour, not just the 10-15% high risk. Now, 15-20 years later, after eight comparative prospective studies comparing data on over 50,000 deliveries, it is evident that EFHM has no inherent benefit over auscultation properly performed. The studies also showed a significant increase in operative deliveries in women monitored with EFHMs - largely attributed to problems in interpreting the print-out.<sup>22</sup>

### *Studies showed a significant increase in operative deliveries in women monitored with EFHM*

Earlier randomised controlled trials (RCT) - which were included in the eight surveys above - demonstrated that EFHM increased the caesarian delivery rate dramatically. When used without fetal scalp blood analysis as back-up, the rate more than doubled, (6.6% to 16.3%<sup>23</sup>; 4.3% to 9.6%<sup>25</sup> and 5.6% to 17.6%<sup>26</sup>).

According to Judith Lumley, the fetal heart monitoring story is in microcosm the story of the whole obstetric decade. It includes the powerful professional urge towards 'scientific management'; the commercial and other pressures, first to acquire and then, increasingly, to use expensive equipment; the devaluing of clinical skills; the philosophy of, that which is good for 10% of women should be given to 100%, "to be on the safe side"; the great debate between 'intensive care' and 'back to nature' views of birth; the explosion of malpractice suits and defensive practices.<sup>27</sup>

Now, the American College of O&G (ACOG) Executive Board has acknowledged that intermittent auscultation at appropriate intervals is as effective as EFHM. It has prepared Guidelines for Perinatal Care and these have been mailed to all Fellows.<sup>28</sup> Interestingly, ACOG notes that more staff will be necessary for auscultation than was needed when a woman was hooked up to a machine! This means that women can now look forward to more attention and support in labour - if the staff numbers are increased. In Auckland midwives are in short supply and delivery units are seriously understaffed.

Belatedly, Britain's National Physical Laboratory has developed a device that will measure the ultrasound beam. It plugs into an IBM computer and will be marketed by private companies. The detector and processor will cost about \$30,000.<sup>29</sup>



### References

1. Mendelsohn, Dr Robert, *The People's Doctor*, vol 7, No 11 1984 Ultrasound Dangers Revealed.
2. Edited by H.F. Stewart & M.E. Stratmeyer, Bureau of Radiological health, Rockville reported in *The Safety of Diagnostic Ultrasound*, British Journal of Radiology, Supplement No 20, London, 1987. The animal study bioeffects are listed as DNA degradation, cell lysis, cellular inactivation, modification of cellular ultrastructures, alterations of the plasma membrane, increase in frequency of sister chromatid exchanges, fragmentation of nucleoli, acoustic strumming of cytoplasm, damage to mitochondria, disturbances of the mitotic spindle and increased frequency of giant cells.
3. Mendelsohn op.cit.
4. *The Safety of Diagnostic Ultrasound*, edited by Professor P.N.T. Wells, Bristol; Report of a British Institute of Radiology Working Group with representative of Royal College of O&G, Royal College of Radiologists, British Medical Ultrasound Society, College of Radiographers, Institute of Physical Sciences in Medicine, 1987 p 27, quoting AIUM/NEMA Standards Publication No ULI-1981, *Jnl of Ultrasound in Medicine*, 4 (No 2 Supplement) 1983.
5. *Ibid*, p 28 Biological Effects of Ultrasound: Mechanism & Clinical Implications, NCRP Report No 74, Bethesda 1983.
6. *Ibid*, Report of a Consensus Development Conference, National Institute of Health, Bethesda, 1984.
7. Mendelsohn, *The People's Doctor*, Vol 11 No 1.
8. *British Jnl O&G*, December 1987 quoted by Ann Oakley at Women's Health Research Seminar by Phillida Bunkle, 21.9.89.
9. Bakketeig *et al*, 1984, Randomised controlled trial of ultrasonographic screening in pregnancy, *Lancet* ii, 207-24; and Neilson *et al*, 1984, Screening for small for dates fetuses: a controlled trial, *British Medical Jnl* 280, 1179-1182.
10. Rossavik & Fishburne, Conceptional Age, Menstrual Age, & Ultrasound Age: A Second Trimester Comparison of Pregnancies of Known Conception Date with Pregnancies Dated From the Last Menstrual Period, *Obstetrics & Gynecology*, Vol 73, No 2, Feb 1989, pp 243-49.
11. David *et al*, 1975, Doppler ultrasound & fetal activity, *British Medical Jnl* ii, 62-64.
12. Steer, P.J., *British Jnl Hospital Medicine*, 17 p 219.
13. Lumley, Judith, *New Doctor* (Australia) No 15, 1980.
14. Margaret Whyte, Society to Support Home Confinement, (U.K.) Letter, Dec 1981.
15. Thompson, Richard C., *The Unknowns of Ultrasound*, *FDA Consumer*, March 1983.

Continued on Page 22

## Coming Events

### Fourth International Congress on Women's Health Issues

14-17 November 1990  
Massey University

Theme:  
Women as Health Providers Within a  
Context of Culture, Society and  
Health Policy

Contact:  
Fourth International Congress on  
Women's Health Issues,  
Department of Nursing Studies  
Massey University,  
Palmerston North.

\* \* \*

### Homeopathy for Newborn Infants

14th November 1990 at 7.30 pm  
College of Natural Medicine  
80 Park Terrace  
Christchurch  
Cost: \$4-00

Contact: Canterbury Homeopathic  
Society  
Barbara Thompson  
Phone: (03)389-801

\* \* \*

### Pelvic Examination Course for Nurses 1990

21-22 November 1990  
Nursing Administration,  
NZ Family Planning Association,  
214 Karangahape Road,  
Auckland.  
Phone: (09)775-049  
Cost: \$150-00

(A skills based course involving a  
one and a half day theoretical  
component followed by clinical  
experience in the taking of cervical  
smears and bi-manual examina-  
tions.)

\* \* \*

### Midwives Workshop 1991

13th & 14th April 1991  
Manawatu Polytechnic  
Palmerston North  
(Guaranteed to be another sensa-  
tional weekend - details to follow.)

\* \* \*

## Book Review

### Handbook of Obstetrics and Gynaecology (3rd Edition)

Edited by Barry G. Wren, MD, MB BS,  
FRACOG, FRCOG  
Rogerio A. Lobo, MD  
Chapman & Hall Medical, 1989. \$52.50

This 375 page Handbook was designed for the use of medical students at the University of New South Wales. It is now used in other parts of the world and has been revised for the third time since its first publication in 1979.

It is difficult for a midwife to review a text designed for the use of doctors and medical students. However, the knowledge that much of the basic midwifery teaching uses straight-out medical textbooks or medically based ones, spurred me to try and review this book with as little prejudice as I could muster.

The Handbook does what it sets out to do and does it well. Each chapter begins with the general instructional objective and specific behavioural objectives clearly spelled out so that the student knows what they must learn. The student is told the reason why he/she needs to learn about each particular facet of pregnancy, childbirth and gynaecology that is discussed in the chapter. Clinical descriptions are clear, concise and easily understood. Medical management of the normal and abnormal is clearly outlined without discussion or acknowledgement of the variations in women's menstrual cycles and the effect this will have on the estimated due date. There is a useful table of Assessment of Gestational Age.

The main focus in this book is on the procedures and skills a student has to

learn. Nowhere is the woman acknowledged as a recipient of or a participant in events that are occurring in and to her body. I found it astonishing that a book with a publication date of 1989 uses the concept of the EOC - the estimated date of confinement - with all its Victorian overtones. And under the section entitled "Delivery of the baby", we find:

"The natural method for delivery is for the mother to squat on her haunches. .... However, it is usually more convenient for the obstetrician to assist or manipulate during delivery if the mother is in the dorsal or lateral position. In most developed countries as a result of adequate maternal nutrition the relationship between the foetal size and brim area is such that alteration of the angle of inclination is not critical for a normal delivery."

Routine procedures such as iron supplementation, ultrasound, episiotomy, administration of oxytocic drugs, suction, delivery of the placenta are all, without question or reference, presented as matters of fact, not choice. The breast feeding information offered is sketchy and outdated.

I cannot recommend this book to midwives or students of midwifery although there is no faulting the factual information presented. Some student midwives may find it useful for pre-exam revision purposes. But the philosophy underlying the book is so far removed from the holistic approach used in midwifery and the basic premise of pregnancy and childbirth as a normal physiological function which sometimes goes wrong, that I would prefer midwives and students of midwifery to give this Handbook a wide berth. ■

Bronwen Pelvin

## Ultrasound (Cont. from p. 21)

16. McKinlay, J.B., From "Promising Report" to "Standard Procedure": *Seven Stages in the Career of a Medical Innovation*, Milbank Memorial Fund Quarterly 59:374, 1981 quoted by Judith Lumley Birth Vol 9.3, 1982.
17. *The Practising Midwife*, No 12, 1981.
18. *Association of Radical Midwives Newsletter*, June 1978.
19. Clark et al, *Amer Jnl Obstets/Gynecol* 1989:160:694.
20. Phillips, D., *Fetal Monitoring, Update* 10 Oct 1986.
21. *Midwifery Quarterly (N.Z.) Newsletter*, 1984.
22. *International Jnl Childbirth Educators*, Nov 1988.
23. *International Jnl Childbirth Educators*, May 1989.
24. Haverkamp et al, *Am Jnl Obstet/Gynecol* 125:310, 1976.
25. Kelso et al, *Am Jnl Obstet/Gynecol* 131:526, 1978.
26. Haverkamp et al, *Am Jnl Obstet/Gynecol* 134:399, 1979.
27. Lumley, Judith, *Foetal Monitoring A Look At The Evidence*, *New Doctor (Aus)* No 15, 1980.
28. *International Jnl Childbirth Educators*, May 1989.
29. *New Scientist (U.K.)* April 1986.



# New Zealand College of Midwives Membership Form

## Regional Information

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_ Home \_\_\_\_\_ Work \_\_\_\_\_

Place of Work \_\_\_\_\_

## Type of Membership

Full Member (Registered Midwife Full or Part Time)	\$52.00
Full Member (Student Midwife or Registered Midwife on Maternity Leave or Unwaged)	\$26.00
Associate Member (Other interested individual)	\$52.00
Associate Member (Unwaged interested individual)	\$26.00
Affiliated Member (Other Groups e.g. Parent Centre, La Leche League, etc)	\$26.00

## Method of Payment

Please tick your choice of payment method.

- Subscription payable to College Treasurer (Please enclose cheque or money order)
- Deduction from Salary (Please arrange with your pay office)

## National Information

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_ Home \_\_\_\_\_ Work \_\_\_\_\_

Date of Birth \_\_\_\_\_ NZNA MEMBER: YES/NO [Delete One]

## Type of Membership

- Full 
 Waged  
 Unwaged
 

 Associate 
 Waged  
 Unwaged
 

 Affiliate

Place of Work \_\_\_\_\_

*Please return completed form (together with money if applicable) to  
Local Regional Treasurer  
New Zealand College of Midwives*

# WELEDA

## Baby Care Preparations

have been working effectively for over 60 years.

The same care mothers exercise in selecting the best possible foods for their baby's nutrition, is taken by WELEDA in the manufacture of the WELEDA Baby Care Preparations, which are absorbed and act through the baby's skin.

Calendula, the original Marigold, has been widely acknowledged as a healing plant: herbalists call it a vulnerary. Research shows the Calendula plant to possess marked anti-inflammatory and antiseptic properties. The mild and soothing qualities of Calendula make it WELEDA's perfect choice as the basis of the WELEDA Baby Care Range.

Unlike the majority of baby products marketed today, WELEDA Baby Preparations are entirely natural. No synthetic preservatives, no colouring materials and no petroleum derivatives, such as paraffin, are used. Such substances are foreign to the human skin (especially the delicate skin of a baby), and hinder the elimination and absorption processes occurring through the skin.

WELEDA recognises our bodies as living organisms and treats them accordingly with preparations from the living kingdoms of nature. This principle is basic to all WELEDA products, whether for internal or external use.

From biodynamic plant extracts, first quality plant oils, unadulterated natural essential oils, and waxes, the WELEDA Baby Care Range is formulated to provide effective and natural protection, while still allowing the skin to breathe.

### Weleda Baby Care Products



gentle and effective

made entirely from  
fine natural ingredients

Nappy Rash Cream  
Calendula Baby Oil  
Calendula Baby Cream  
Calendula Baby Powder  
and other products

Available from selected Pharmacies  
and Health Food Stores

or from  
FREEPOST NO. 125  
WELEDA (NZ) LTD  
HAVELOCK NORTH  
TELEPHONE (070) 777-394

**WELEDA BABY PRODUCTS ARE BABY FRIENDLY**  
**Let your baby discover why!**