THE ROLE OF THE GENERAL PRACTITIONER IN POSTNATAL CARE:
AN EARLY INTERVENTION STUDY

BY
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A thesis submitted in fulfilment
of the requirements for the degree of
Doctor of Philosophy.
August 1997

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DECLARATION

This thesis is less than 100,000 words in length, exclusive of tables, figures, bibliographies, footnotes and appendices

_________________________________________________________________
SUMMARY

This thesis deals with the role of the general practitioner (GP) in postnatal care, especially the provision of and the most appropriate timing for the traditional postnatal check-up.

Chapter 1 discusses the origins of postnatal care, the common morbidities, the lack of formal research in the area and the opportunity that the routine postnatal check-up presents to general practitioners.

Chapter 2 shows, by the analysis of routinely collected Medicare data, that a mother and baby will have 7.7 visits (on average) to a GP in the six months after birth and many women will attend a GP for their routine postnatal check-up.

Given the frequent contacts that GPs have with mothers and babies a Statewide postal survey of 1104 general practitioners was used to obtain their views towards postnatal care. The main findings are presented in Chapter 3. Most GPs are involved in postnatal care. Female GPs have different views from male GPs as to what should take place at the routine postnatal check-up. Overall, GPs are placing too much emphasis on routine examination and neglecting many of the common problems, both physical and emotional. Many GPs lack confidence to deal with common postnatal problems.

GPs provide many visits in the early weeks prior to the traditional check-up. Some GPs believed that an earlier timing for the traditional postnatal check-up might improve maternal health. Chapter 4 reports on a randomised controlled trial designed to test whether a visit to a GP one week after discharge resulted in improved maternal health, as measured by the Edinburgh Postnatal Depression Scale (EPDS), the Short Form 36 (SF 36) subscales, self-report items about physical and emotional health and items about satisfaction with the check-up. Whilst the change in timing of the check-up resulted in less routine
examination and more time to talk there were no differences in maternal health between the groups.

The survey of general practitioners and the randomised controlled trial of an early postnatal check-up revealed a number of problems with the current postnatal check-up. To explore these problems further the findings of the GP survey are compared with the experiences of women in the standard care group of the trial. These findings are reported in Chapter 5 and indicate that many women experience problems after childbirth and some may consult a GP about the problems. However, only the minority of women will rate the GP as ‘very helpful’. Many women are dissatisfied with their postnatal check-up and the current postnatal check-up is not focussed on the common problems.

Whilst the traditional postnatal check-up provides an opportunity for the general practitioner to improve maternal health, this is not likely at present. If GPs are to have a role in improving maternal health a new approach to the postnatal check-up is needed. Chapter 6 provides a framework for a postnatal check-up in general practice, which might make that difference.
ACKNOWLEDGEMENTS

Special thanks are due to my supervisors: Judith Lumley, for her expert advice, interest, time, encouragement, support and rigorous approach to research design and analysis and to Doris Young, for her encouragement to undertake a higher degree, assistance in making it possible, advice, interest, time and support throughout my candidature.

Thanks are due to the General Practice Evaluation Program for granting me a Scholarship to undertake this work and to the Royal Australian College of General Practitioners who provided project funding. Thanks also to the general practitioners and women who took part in the studies reported in this thesis, Barbara Toohey, Health Insurance Commission who assisted in obtaining Medicare data, and to members of the Reference Group for their time, interest and advice.

In particular I thank: Patty Chondros who assisted with data management, entry, analysis, statistical and computing advice beyond the call of duty; Marg Watts, Judy Parry and Cathy Grant who tirelessly recruited women for the trial, Kym Tyzack who proof-read the entire work and Jane Halliday for data monitoring.

Thanks to Ngaiire Kerse for hours of discussion and support and to my other general practitioner colleagues: Michael Montalto, Alison Stubbs, Platon Vafiadis, Teng Liaw, Marie Pirotta, Kathryn Robertson, Lena Sanci and Wendy Vanselow for their support, friendship and encouragement.

Special thanks to Stephanie Brown, Rhonda Small, Dick Sloman, Julia Shelley and all the staff at the Centre for the Study of Mothers’ and Children’s Health, LaTrobe University who gave their time, expertise, friendship and encouragement.

Thanks to staff at the Queensberry Children’s Centre, Mandi Shanahan and Suzie Fry who cared so ably for Thomas and James.

And most importantly, to my family and in particular: Christopher, Thomas and James Gunn: thank-you.
DEDICATION

This thesis is dedicated to my parents

Alfred and Violet Chown

who taught me the importance of inquiry
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY</td>
<td>ii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iv</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>v</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xii</td>
</tr>
<tr>
<td>ABBREVIATIONS</td>
<td>xiii</td>
</tr>
<tr>
<td>PREFACE</td>
<td>xiv</td>
</tr>
</tbody>
</table>

Chapter 1 INTRODUCTION

1.1 The routine postnatal check-up 1
1.2 Health after childbirth 13
1.3 Researching the role of the GP in postnatal care 34

Chapter 2 USE OF GENERAL PRACTITIONER SERVICES IN THE SIX MONTHS AFTER BIRTH

2.1 Background 36
2.2 Method 37
2.3 Results 38
2.4 Discussion 42
2.5 Conclusions 45

Chapter 3 GENERAL PRACTITIONERS AND THE ROUTINE POSTNATAL CHECK-UP

3.1 Background 46
3.2 Method 48
3.3 Results 56
3.4 Discussion 71
3.5 Conclusion 81
Chapter 4

THE POSTNATAL CARE PROJECT: a randomised controlled trial of an early postnatal check-up

4.1 Background
4.2 Method
4.3 Results
4.4 Discussion
4.5 Conclusions

Chapter 5

MEETING MOTHERS' NEEDS - THE POSTNATAL CHECK-UP IN GENERAL PRACTICE

5.1 Background
5.2 Method
5.3 Results
5.4 Discussion
5.5 Conclusions

Chapter 6

THE FUTURE OF POSTNATAL CARE IN GENERAL PRACTICE

BIBLIOGRAPHY

APPENDICES

Appendix I

Survey of General Practitioners

3.1 Letter to general practitioners
3.2 Survey of general practitioners
3.3 Reminder postcard for GP survey
3.4 GP Practice Assessment activity

Appendix II

The Postnatal Care Project

4.1 Postnatal Care Project information booklet
4.2 Postnatal Care Project logo
4.3 Antenatal introductory pamphlet
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4</td>
<td>Postnatal ward poster</td>
</tr>
<tr>
<td>4.5</td>
<td>Recruitment guidelines</td>
</tr>
<tr>
<td>4.6</td>
<td>Plain English trial information sheet</td>
</tr>
<tr>
<td>4.7</td>
<td>Diagram of trial procedure</td>
</tr>
<tr>
<td>4.8</td>
<td>Trial consent form</td>
</tr>
<tr>
<td>4.9</td>
<td>Non-participants form</td>
</tr>
<tr>
<td>4.10</td>
<td>Participants entry form</td>
</tr>
<tr>
<td>4.11</td>
<td>Entry survey</td>
</tr>
<tr>
<td>4.12</td>
<td>Randomisation schedule</td>
</tr>
<tr>
<td>4.13</td>
<td>Letter to GP - standard care group</td>
</tr>
<tr>
<td>4.14</td>
<td>Letter to GP - intervention group</td>
</tr>
<tr>
<td>4.15</td>
<td>Health Contacts Card</td>
</tr>
<tr>
<td>4.16</td>
<td>Change of address card</td>
</tr>
<tr>
<td>4.17</td>
<td>Covering letter for 3 and 6 month surveys</td>
</tr>
<tr>
<td>4.18</td>
<td>Three month survey</td>
</tr>
<tr>
<td>4.19</td>
<td>Six month survey</td>
</tr>
<tr>
<td>4.20</td>
<td>Thank-you for participating letter</td>
</tr>
<tr>
<td>4.21</td>
<td>Reminder postcard</td>
</tr>
<tr>
<td>4.22</td>
<td>Follow-up spreadsheet</td>
</tr>
<tr>
<td>4.23</td>
<td>Feedback pamphlet for participants</td>
</tr>
</tbody>
</table>
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>TABLE</th>
<th>DESCRIPTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Mothers’ visits to general practitioners according to Vocational Registration status</td>
<td>40</td>
</tr>
<tr>
<td>2.2</td>
<td>Babies’ visits to general practitioners according to Vocational Registration status</td>
<td>41</td>
</tr>
<tr>
<td>2.3</td>
<td>Length of GP consultations: mothers versus babies</td>
<td>42</td>
</tr>
<tr>
<td>3.1</td>
<td>Postnatal care in general practice: themes emerging from shared care study</td>
<td>50</td>
</tr>
<tr>
<td>3.2</td>
<td>Demographic characteristics of surveyed GPs</td>
<td>56</td>
</tr>
<tr>
<td>3.3</td>
<td>Number of women seen for a six week postnatal check in the previous year</td>
<td>57</td>
</tr>
<tr>
<td>3.4</td>
<td>What should occur at the six week postnatal check-up: a general practice perspective</td>
<td>59</td>
</tr>
<tr>
<td>3.5</td>
<td>Routine examination and discussion at the six week postnatal check-up: significant differences according to gender of doctor</td>
<td>60</td>
</tr>
<tr>
<td>3.6</td>
<td>Routine examination and discussion at the six week postnatal check-up: significant differences according to age of doctor</td>
<td>62</td>
</tr>
<tr>
<td>3.7</td>
<td>Routine examination and discussion at the six week postnatal check-up: significant differences according to practice location of doctor</td>
<td>62</td>
</tr>
<tr>
<td>3.8</td>
<td>Significant differences between female and male GPs as to what should occur at the six week postnatal check-up adjusted for key GP characteristics</td>
<td>64</td>
</tr>
<tr>
<td>3.9</td>
<td>Roles and responsibilities of general practitioners providing postnatal care: results of thematic analysis of open-ended comments</td>
<td>67</td>
</tr>
<tr>
<td>3.10</td>
<td>Confidence of general practitioners to deal with postnatal problems</td>
<td>69</td>
</tr>
</tbody>
</table>
4.1 List of variables examined in interim analysis

4.2 Demographic characteristics of participants: intervention vs standard care group

4.3 Demographic characteristics of women who returned surveys vs those who did not

4.4 Attendance at the postnatal check-up for women assigned to either the early visit or the standard care group

4.5 Examination at the postnatal check-up for early and standard care visits

4.6 Discussion at the postnatal check-up

4.7 Satisfaction with the postnatal check-up

4.8 SF36 scores for intervention and standard care groups at 3 months after birth

4.9 SF36 scores for intervention and standard care groups at 6 months after birth

4.10 Problems encountered in the three months following birth

4.11 Problems encountered in the month prior to the six month follow-up

4.12 Breastfeeding status for intervention and standard care groups at 3 and 6 months after birth

4.13 Duration of breastfeeding for intervention and standard care groups: results of a survival analysis

4.14 Satisfaction with general practice care in the six months after birth

4.15 Satisfaction with care from general practitioners in the six months after birth: percentage of women who agreed strongly with statements about particular aspects of care

4.16 People talked to about caring for baby in the three months since birth
4.17 People talked to about own health in the three months since birth

4.18 People talked to about caring for baby in the month prior to the six month survey

4.19 People talked to about own health in the month prior to the six month survey

4.20 Mean number of visits to health professionals in the first six weeks, and six weeks to six months, following childbirth for intervention and standard care groups, as recorded on Health Contacts Cards.

5.1 Examination at the postnatal check-up: what women report vs what GPs recommend

5.2 Discussion at the postnatal check-up: what women report vs what GPs recommend

5.3 Problems encountered in the three months following birth, the number of women seeking help from a GP and the number rating that as ‘very helpful’

5.4 Women’s description of their six week postnatal check-up

5.5 The six week postnatal check-up: what women are particularly happy about

5.6 The six week postnatal check-up: what women are particularly unhappy about
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>Description</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>General practitioners services to 650 mothers in the six months following childbirth</td>
<td>39</td>
</tr>
<tr>
<td>2.2</td>
<td>General practitioners services to 650 babies in the first six months of life</td>
<td>41</td>
</tr>
<tr>
<td>3.1</td>
<td>Survey development for survey of general practitioners</td>
<td>51</td>
</tr>
<tr>
<td>4.1</td>
<td>The Postnatal Care Project - schematic design</td>
<td>88</td>
</tr>
<tr>
<td>4.2</td>
<td>The Postnatal Care Project - overview</td>
<td>103</td>
</tr>
<tr>
<td>4.3</td>
<td>Metropolitan recruitment and response rates</td>
<td>104</td>
</tr>
<tr>
<td>4.4</td>
<td>Rural recruitment and response rates</td>
<td>105</td>
</tr>
<tr>
<td>5.1</td>
<td>Problems encountered in the three months after birth</td>
<td>142</td>
</tr>
<tr>
<td>6.1</td>
<td>A Guide to the Postnatal Check-up</td>
<td>162</td>
</tr>
</tbody>
</table>
## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>Beck Depression Inventory</td>
</tr>
<tr>
<td>DPH&amp;CM</td>
<td>Department of Public Health and Community Medicine</td>
</tr>
<tr>
<td>DRACOG</td>
<td>Diploma of the Royal Australian College of Obstetricians and Gynaecologists</td>
</tr>
<tr>
<td>EPDS</td>
<td>Edinburgh Postnatal Depression Scale</td>
</tr>
<tr>
<td>FRACGP</td>
<td>Fellow of the RACGP</td>
</tr>
<tr>
<td>GHQ</td>
<td>General Health Questionnaire</td>
</tr>
<tr>
<td>GPEP</td>
<td>General Practice Evaluation Program</td>
</tr>
<tr>
<td>GP</td>
<td>General practitioner</td>
</tr>
<tr>
<td>HIC</td>
<td>Health Insurance Commission</td>
</tr>
<tr>
<td>ICPC</td>
<td>International Classification of Primary Care</td>
</tr>
<tr>
<td>MCHN</td>
<td>Maternal and Child Health Nurse</td>
</tr>
<tr>
<td>Medicare</td>
<td>The universal health insurance system of Australia</td>
</tr>
<tr>
<td>RACGP</td>
<td>Royal Australian College of General Practitioners</td>
</tr>
<tr>
<td>RDNS</td>
<td>Royal District Nursing Service</td>
</tr>
<tr>
<td>SF 36</td>
<td>Short Form 36</td>
</tr>
<tr>
<td>VR</td>
<td>Vocational Registration</td>
</tr>
</tbody>
</table>
PREFACE

From the research reported in this thesis, one paper has been published and three submitted for publication:

Published:

Submitted:
Gunn J, Lumley J, Young D. Involvement of Victorian general practitioners in obstetric and postnatal care.

Gunn J, Lumley J, Young D. The routine postnatal check-up in Australian general practice and the influence of gender.

Gunn J, Lumley J, Chondros P, Young D. Does an early postnatal check-up improve maternal health: results from a randomised trial in Australian general practice.
CHAPTER ONE

INTRODUCTION

CONTENTS

1.1 The routine postnatal check-up 1.2 Health after childbirth
   1.1.1 A brief history 1.2.1 Overview
   1.1.2 Pelvic examination 1.2.2 Measuring health status
   1.1.3 Timing of the check-up 1.2.3 Depression after birth
   1.1.4 Why bother?
   1.1.5 Why general practitioners?
   1.3 Researching the role of the GP in postnatal care
      1.3.1 Literature search

1.1 The routine postnatal check-up

1.1.1 A brief history

One of the first postnatal clinics was established in Edinburgh in 1927 (Miller 1929). Miller, in an address to the Ayrshire Branch of the British Medical Association in 1929, spoke passionately about the importance of postnatal care and how this area of obstetrics had been neglected:

"Whereas the claims of the expectant mother have of recent years attracted, and rightly so, a full measure of consideration, the need for a similar attitude of guidance and watchful care during the weeks which follow delivery has scarcely received from obstetric teachers and writers the emphasis it deserves" (Miller 1929)

Two years later Bell delivered an Ingleby lecture at the University of Birmingham and spoke eloquently about ‘maternal disablement’ saying that because a woman had survived childbirth:

"...this happy issue is liable to obscure subsequent disabilities which persist, sometimes to ‘dog her footsteps’ for life .... .... the long-drawn-out is too often regarded as inevitable - a pleasing alternative to ‘something worse’. So it is that ... 10% of all mothers -- are more or less crippled ..as the result of childbearing.” (Bell 1931)

It is because of obstetricians such as Douglas Miller and Blair Bell that postnatal care was formalised. It is disheartening, considering their passionate
belief in the effectiveness of the routine review of recent mothers, that some 
sixty years later Glazener et al wrote:

'Despite considerable changes in social, economic, medical and obstetric 
circumstances, the outcome of postnatal care has remained virtually unchanged. It is 
regarded as having little interest for obstetricians. This has produced a neglect of 
planning, direction and leadership...we provide a fragmented, uncoordinated service 
which fails to address the real needs of mothers, whose health has been ignored and 
indeed has deteriorated. Research into the nature and causes of this ill-health is long 
overdue.” (Glazener et al. 1993b)

Postnatal care has not been at the forefront of obstetric teaching, despite the 
recommendations of Miller (1929), Bell (1931) and Browne (1937). The 
Historical Review of British Obstetrics and Gynaecology 1800-1950 makes 
occasional mention, but provides few details of postnatal care or the postnatal 
check-up (Munro-Kerr et al. 1954). In contrast, the classic text by F. J Browne 
‘Antenatal and Postnatal Care’ published in 1937 devotes a full chapter to 
postnatal care (Browne 1937). It is of interest to note that in subsequent 
editions of Browne’s textbook the chapter on postnatal care became smaller 
until it was of such minor significance that the textbook was renamed 
‘Antenatal Care’. And so it appears that the interest in postnatal care, present 
in the twenties and thirties gradually waned.

It is not clear as to the reasons for this decline in interest. There were many 
events that may have shifted the focus away from maternal health and postnatal 
care: the Second World War, the introduction of baby health centres and nurses 
devoted to monitoring the development of babies over the early years of life, 
the sexual revolution of the sixties and the reduction in family size, the move 
towards viewing childbirth as a natural event and treating recent mothers as 
healthy individuals rather than invalids confined to bed. Even though 
awareness of the high rates of maternal morbidity declined the routine postnatal 
check-up had become an institution.

The routine check-up began in the postnatal clinics of Miller (1929) and Bell 
(1931). Browne (1937) advocated routine postnatal check-ups at the end of the 
lying-in period (ten to fourteen days after delivery), six weeks after delivery
and three and six months after the routine six week check. His evidence for advocating these visits was based upon the reports by Bell (1931) and Miller (1929) which stated morbidity rates of ten and thirty percent respectively, and his own opinion as to what would be likely to reduce these morbidity levels.

Browne’s recommendations rely upon the assumption (now not held) that vaginal delivery led to injury and infection of the cervix which could, if left untreated, go on to become carcinoma of the cervix. He also believed that cervicitis and/or prolapse could predispose a woman to chronic backache and abdominal pain. Browne recommended close examination of the cervix and bimanual examination of the uterus and adnexae at each of the postnatal visits. Although Browne stated that it should be noted whether the woman was breastfeeding, whether she was constipated and the breasts and urine should be examined the focus of the six week visit was very much on the genital tract.

Careful documentation of uterine involution in the puerperium has been practised since the late 1800’s and uterine involution is considered to be complete by six weeks (Hytten 1995); which most likely accounts for the traditional six weeks postpartum timing for the check-up. However, Woessner and Brewer show that for many women the uterus may never completely return to its pre-pregnant state (Woessner & Brewer 1963). In a careful observational study of 28 women, there was considerable variation in the pattern of uterine involution in women who had a normal puerperium (Cluett et al. 1997). The authors concluded that routine assessment of uterine involution should be abandoned.

1.1.2 The routine pelvic examination

The belief in the need for a thorough pelvic examination as the focal point of the six week postnatal check-up remained unquestioned until recently, despite the increased knowledge about the pathogenesis of cervical cancer. Checking for uterine involution at the postnatal visit continues to be recommended as an important part of the postnatal check-up (Beischer & Mackay 1986; Giles
The recommendations are given as routine: Smibert simply states that 'a pelvic examination will form part of this consultation' (Smibert 1989) whereas Giles gives a little more detail commenting that 'special attention should be given to...the perineum (for tenderness), the vagina (for laxity and stress incontinence of urine), the cervix (for tears), and the uterus (for its size and position)'. However, Giles goes on to state that 'cervical erosions should not be cauterised, nor should a retroverted uterus be anteverted...unless it is the cause of deep dyspareunia' (Giles 1982). Even though routine pelvic examination is recommended there is a lack of evidence about what action to take, or not to take, on the basis of the clinical findings.

The importance of the routine vaginal examination has been questioned by a number of authors (Bowers 1985; Noble 1993; Sharif et al. 1993; Strube 1980). Strube wrote in 1980 that the vaginal examination was unwarranted as it was unlikely to yield to any useful information (Strube 1980). Bowers, agreeing with this opinion, undertook a survey of mothers and general practitioners to gain some information about the check-up (Bowers 1985). The mothers were interviewed in their homes and a 90% participation rate was achieved, however, the postal survey of GPs had a response rate of only 54% and therefore may not be representative. Bowers found that 88% of women attended for a six week postnatal check-up and that only one woman was found to have a retroverted uterus and that all other problems could have been detected from discussion and observation. However, 100% of female GPs and 98% of male GPs believed that a vaginal examination should always be performed. Bowers recommended that the format of the postnatal examination be changed to place more emphasis on discussion about a mother's feelings and childrearing (Bowers 1985). There is no evidence to suggest that such a change took place. Indeed, in 1993 when Sharif et al examined the case records of 150 women attending for their six week postnatal check they found that all of the women had a vaginal examination (Sharif et al. 1993). Only 17% of the women had a clinical indication for the examination (pap smear,
vaginal discharge, dyspareunia, IUCD insertion). Of the 125 women having a routine vaginal examination 119 had no abnormal findings, 3 women were found to have a ‘bulky uterus’ (no action was taken) and 3 women were found to have cervical ‘ectopy’ (cervical smears taken, all reported as normal) (Sharif et al. 1993). This paper added further evidence to question the tradition of routine vaginal examination in asymptomatic postpartum women. The article prompted an editorial in the *British Medical Journal* by Noble which encouraged readers to take note of the findings of Sharif (1993) and to perform a vaginal examination only if specifically indicated. Noble (1993) suggested that more emphasis should be given to backache, depression, infant feeding and contraception (Noble 1993).

The opinions of women about the necessity for a vaginal examination may have changed over the years. Rowntree and the Royal College of Midwives found that women thought the vaginal examination was very important to ‘check that everything was back in place’ (Bowers 1985). However, Bowers reported that women viewed discussion about contraception, feelings and infant feeding as the most important part of the check-up (Bowers 1985).

The studies reported in this thesis look in detail at the postnatal check-up in Australian general practice. In particular the thesis examines the care offered to women, especially at the routine postnatal check-up. The emotional and physical aspects of maternal health addressed at the postnatal check-up are discussed in depth.

### 1.1.3 The timing - too late, too early or just right?

In the limited published material available there is no lack of opinion about the most appropriate timing(s) for the postnatal check-up, or series of check-ups. It has been noted that “Because there has been so little conceptualization of the postpartum period and the needs of women...it is important to examine the assumptions that have formed the basis of program development in this period of the reproductive cycle.” (Winikoff & Mensch 1991).
Gruis, in her work about the postnatal concerns of mothers in the USA found that mothers had many concerns in the first postnatal month for which they seldom sought help (Gruis 1977). On the basis of this finding she recommends that mothers should return to their doctor 1 to 2 weeks after discharge, as well as the traditional postnatal check. The effectiveness of this recommendation has not been evaluated. However, Stover and Marnejon continue to recommend an early postpartum check-up, sometime between two days and two weeks after birth, as well as the six week check-up (Stover & Marnejon 1995). Smibert, an Australian obstetrician, suggests visits at two, four and six weeks postnatally (although he advises that a four week visit is not necessary if the woman has previously successfully breastfed); again based only on opinion (Smibert 1989).

If the postnatal check-up is to provide contraceptive advice then six weeks postpartum will be too late for some women, as they will have resumed intercourse by this time (Mabray 1979; Richardson et al. 1976). Mabray undertook two cross-sectional surveys of consecutive women attending the six week check in 1972 (Darnall ‘army wives’) and 1977 (private practice). He found that many women had resumed unprotected intercourse within the first few postnatal weeks and suggested that the timing of the postnatal check-up should be reviewed, stating that one month and six week timings seem inappropriate (Mabray 1979). It may be that flexibility of timing for the commencement of postpartum contraception is more appropriate than a fixed schedule (Winikoff & Mensch 1991).

Giles, another Australian obstetrician, supports the timing of six weeks, as it allows examination to confirm that “the pelvic organs have returned to their pre-pregnant state” although he does note (without reference) that some advise that the postnatal visit should occur earlier, in the second or third postnatal week, to enable issues such as feeding problems to be dealt with as they occur (Giles 1982). Noble also supports the continuation of the six week timing for the postnatal check-up as ‘an important tradition’ (Noble 1993).
There have been two recent well conducted studies relevant to the six week check-up which have, after considering available evidence, called for a re-evaluation of the current timing of the check-up. Glazener and Abdalla et al., using postal surveys of a 20% population-based random sample of recent mothers, note that there is an urgent need for a systematic evaluation of the various models of postnatal care and suggest that there may be value in piloting a routine six month check-up in order to reduce the long term morbidity found to be common in their study (Glazener et al. 1993a). Bick and MacArthur, using a hospital-based sample of recent mothers, found high levels of postnatal morbidity (Bick & MacArthur 1995a), yet the postnatal check-up failed to attend to these problems (Bick & MacArthur 1995b). Bick and MacArthur called for a re-examination of the timing and content of the routine check-up (Bick & MacArthur 1995b).

There are many opinions about when women should be routinely reviewed after giving birth. The practice of reviewing women at six weeks postpartum is not supported by the current evidence. There is no reason to continue to adhere to this traditional timing and there are many reasons, which will be discussed, which would support the trialing and careful evaluation of different timings for the routine postnatal check-up. A randomised trial to test if the routine review of women one week after hospital discharge results in better maternal health than the routine six week postnatal review is presented in Chapter 4.

1.1.4 Why bother with the routine postnatal check-up?

Considering that the routine pelvic examination yields little or no information (Sharif et al. 1993) and there is much disagreement over the most appropriate timing for the check-up, perhaps the routine postnatal check-up should be abandoned? However, 80% - 90% of women will attend a check-up (Bick & MacArthur 1995b; Bowers 1985; Cranfield 1983) and Bowers found that only 17% of women thought the postnatal check-up was ‘not worth attending’. Considering the concerning levels of postnatal morbidity (Bick & MacArthur
1995a; Brown & Lumley in press; Field et al. 1983; Glazener 1997; Glazener et al. 1993a; Glazener et al. 1995; Glazener et al. 1993b) it would appear premature to stop such a check-up, as it has the potential to improve maternal health.

The high levels of postpartum morbidity are not new. Miller reported that 30% of women suffered from problems such as leucorrhoea, backache, subinvolution, prolapse, retroversion and cervicitis (Miller 1929). Bell stated that 10% of women experienced problems such as: nervous disorders (mental shock, puerperal insanity, chorea gravidarum), heart and renal disease, diabetes, thyroid disease, ovarian atrophy, malignancy, cervicitis, cystitis, dental problems, dietary insufficiencies and cervical cancer (Bell 1931). Bell also noted the importance of recognising the sociological aspects of childbirth and noted the 'evils attaching to poverty and ignorance'. The health of mothers is as relevant today as it was in the first part of this century.

A few reports about women's health after childbirth have appeared in the literature scattered over the last three decades. The early work is difficult to interpret as details about sample selection and study design are missing. Gruis reports high levels of postnatal problems such as tiredness, haemorrhoids and issues relating to sex, relationships, emotions, body image and perineal pain (Gruis 1977). However, the sample size was small (40 women), only married, private patients were selected for the study and the response rate was not stated. Field et al also reports on a small study of 51 women, interviewed at various time points in the year following birth; again the participation rate is not stated (Field et al. 1983). However, Field et al's study lists very similar health problems: tiredness, depression, excess weight, backache, vaginal discharge, haemorrhoids/constipation, prolonged bleeding, headache, mastitis and wound infection. Bowers, in a survey of a random sample of mothers, with a 90% response rate, found a familiar list of common problems: haemorrhoids, backache, vaginal discharge, depression, bladder trouble, concerns about sexual intercourse and tearfulness (Bowers 1985).
Recently, studies using more reliable methods and detailed analyses have been undertaken, revealing that the common problems persist. A large retrospective postal survey of 11,701 women in the UK found similar problems to those listed above (MacArthur et al. 1991a; MacArthur et al. 1991b) as did a survey to a 20% random sample of 1200 women giving birth in the Grampian region in the UK in a one year period (Glazener et al. 1993a; Glazener et al. 1995) and a postal survey of 1278 women giving birth at a large maternity hospital in Birmingham over a six month period (Bick & MacArthur 1995a). Similar findings have been reported for Australian women in a Statewide survey of a population-based representative sample of recent mothers (Brown & Lumley in press). Every study published in the last two decades has found concerning levels of postnatal morbidity. Added to this is the finding that many women do not seek help for these problems (Bick & MacArthur 1995a; Bick & MacArthur 1995b; Brown & Lumley in press; Field et al. 1983; Glazener et al. 1995; Gruis 1977).

The challenge arises when it is realised that more than 85% of women attend for their postnatal check-up (Bick & MacArthur 1995b; Bowers 1985) yet 76% of women will report at least one health problem eight weeks following childbirth, many of which go unreported to the doctor (Glazener et al. 1995). In many cases the postnatal check-up is not identifying these problems (Bick & MacArthur 1995b; Bowers 1985). However, the routine postnatal check-up remains an opportunity for interventions aimed at reducing the current levels of postnatal morbidity.

### 1.1.5 Why general practitioners?

The involvement of general practitioners in obstetric care has changed dramatically in recent decades. Many authors have debated the role of the GP in intrapartum maternity care (Gillet 1997; Lloyd 1975; Loudon 1990; Marsh 1982; Smith & Jewell 1991a; Smith & Jewell 1991b; Young 1991). For many complex reasons, few general practitioners are currently providing intrapartum care in Australia (Andersen et al. 1986; Liaw et al. 1993) or overseas (Lloyd
The move away from general practitioner intrapartum care has seen an increase in the number of maternity units offering shared antenatal care and many general practitioners are involved in shared care programs providing routine antenatal and postnatal care to women perceived to be at low risk of pregnancy complications (Del Mar & O'Connor 1994; Halloran et al. 1992; Isaac 1986). In 1989 fewer than 2% of women giving birth received shared antenatal care (Lumley et al. 1990) compared with 10% in 1993 (Laslett et al. 1997).

The increase in shared care as a model of obstetric care; along with the current practice whereby maternity hospitals advise women to return to their general practitioner for postnatal care, rather than attend a hospital outpatient clinic, means that despite the decline in GP intrapartum care, the general practitioner is very likely to be involved in postnatal care. A survey of a random sample of GPs in the UK found that 98% were involved in postnatal care (Smith 1994). This thesis provides the first data about the level of involvement of Australian GPs in postnatal care.

General practitioners are in the unique position of being able to provide continuity of care from before pregnancy, throughout pregnancy, after birth and for mother and child in the subsequent years (Young 1991, Scherger et al. 1992a). It is not known the extent to which continuity of care occurs within Australian general practice (Harris & Frith 1996), although over 90% of patients will visit a doctor they have seen before (Bridges-Webb et al. 1992).

Women express a desire to see the same doctor throughout their pregnancy (Smith 1996a). Continuity in maternity care has been viewed as seeing the same midwife or doctor throughout pregnancy, birth and the early puerperium and has been endorsed as an indicator of success in the Changing Childbirth report in the UK (Expert Maternity Group 1993). When general practitioners are involved in intrapartum care they can provide an especially comprehensive continuity of care that may extend over years rather than months (Loudon
As general practice intrapartum care declines why should the GP be involved in maternity care? Perhaps maternity care should be the domain of midwives and maternal and child health nurses? This thesis will look in detail at the special skills that the general practitioner can bring to postnatal care, in particular.

If the GP is unlikely to provide intrapartum care then what kind of continuity of care can they provide to women as they create their families? The GP sees shared antenatal and postnatal care as better continuity than ‘losing’ contact with a woman who seeks pregnancy care elsewhere (Halloran et al. 1992). Shared care is rewarding for GPs (Halloran et al. 1992). However, the current models of shared antenatal care in Australia may not provide the continuity of care that women or GPs desire (Laslett et al. 1997).

Ideally, the GP takes a broad view of maternity care and provides care for a woman as Smith states: ‘in the context of caring for her other health problems, for her other non-medical problems, for her health before and after this pregnancy, and for her family’s health’ (Smith 1996b). The potential for continuity of care, at least for certain time periods in one’s life, is an important part of general practice (Harris & Frith 1996; Smith 1996b). General practitioners commit themselves to a group of people rather than a body of knowledge, and perceive problems in a personal and social context (McWhinney 1975). The general practitioner treats individuals in the context of the family (Christianson 1983) and this provides many potential benefits for postnatal care (Gjerdingen & Fontaine 1991) as the GP can assist in the journey through the ‘unpredictable life-cycle’ (Candib 1985). General practitioners manage disease and illness in context, aim to prevent illness and promote health, sort out ill-defined problems and co-ordinate care.

Involvement in maternity care has been seen as the linchpin of general practice (Loudon 1990) and the characteristics mentioned above are central to good general practice care, including the care of women after childbirth. Indeed, the
postpartum period is an example of when the general practitioner can truly practise ‘family medicine’ by attention to the family processes in illness and illness behaviour, skill in dealing with maternal concerns and the ‘problems of living’ and a preventive focus to health care (Christie et al. 1984).

A postal survey of women in the UK found that 69% of women believed that general practitioners had an important role to play in postnatal care (Smith 1996a). There are few studies of satisfaction with GP postnatal care and the results differ. When a global question about postnatal care from the GP is asked Cranfield reports 50% satisfied with care (Cranfield 1983), whereas Smith reports 75% satisfied (Smith 1996a). In Smith’s survey more women were satisfied with antenatal care (87%) from their GP than postnatal care (75%) from their GP. These findings need to be interpreted mindful of the fact that general questions about satisfaction with care are likely to yield high levels of satisfaction (Brown & Lumley 1993). It may be more useful to look at the number of women who rate their care very highly. In Smith’s study 28% agreed strongly with the statement ‘I am entirely satisfied with the postnatal care from my GP’ (Smith 1996a). This implies that some improvements could be made to postnatal care but it gives no indication of what they may be. Women tend to rate postnatal care in the community lower than postnatal care in hospital (Glazener et al. 1993a).

It has been suggested that the general practitioner’s postnatal role is to “anticipate and correct any problems that develop in either the mother or the baby, while assisting with integration of the new infant into the family” (Scherger et al. 1992b). The general practitioner is well placed to be involved in postnatal care yet, it is likely that postnatal care in general practice could improve. Data are presented in this thesis which detail: the level of general practitioner involvement in postnatal care (Chapter 2 and 3), the attitudes of general practitioners towards postnatal care (Chapter 3), the current nature of postnatal care in general practice (Chapter 4 and 5) and recommendations for improvement of postnatal care (Chapter 6).
1.2 Health after childbirth

Whilst it has been known for many years that problems like backache, perineal pain, haemorrhoids and depression can occur after childbirth, accurate data from population based samples, about the prevalence of such problems, has been lacking. It has been a commonly held belief that most problems are encountered in the early days postpartum (Glazener et al. 1995). The recent work by Bick and MacArthur (Bick & MacArthur 1995a) and Glazener et al (Glazener et al. 1995) in the UK and Gjeriden et al (Gjerdingen et al. 1993) in the US show, that for many women, health problems begin after discharge, in the early months following birth, and that whilst there is a general improvement in health over time, the rate of improvement is much slower than previously thought.

The common postnatal problems are mentioned frequently throughout this thesis. This section provides an overview of the common maternal morbidities with reference to the potential role of the general practitioner to deal with the common problems of tiredness/exhaustion, backache, sex, haemorrhoids, perineal pain, depression (Section 1.2.3) and urinary incontinence.

1.2.1 Overview of physical problems

Physical problems after birth are common. Tiredness and backache are very common problems for women (Bick & MacArthur 1995a; Brown & Lumley in press; Field et al. 1983; Glazener et al. 1993a; Glazener et al. 1995; MacArthur et al. 1991a). Prevalence rates of between 40% and 70% are reported for tiredness and 20% and 46% for backache, at varying times during the year after birth. The variation in the prevalence rates reported by researchers is found for many of the common problems. This variation makes it difficult to discuss the findings and suggest ways of improving maternal health.

The reason for the variation in prevalence rates reported in studies of maternal morbidity is likely to arise because of a few key factors. Firstly, the study
design; some studies report on population based samples (Brown & Lumley in press; Glazener et al. 1995; MacArthur et al. 1991a) and others on hospital based samples (Bick & MacArthur 1995a; Gjerdingen et al. 1993) which introduces some selection bias. The Gjerdingen et al (1993) study is further weakened by the fact that only primiparous, white women who worked during pregnancy were included in the study, making the results ungeneralisable. MacArthur (1991) undertook a large retrospective survey (but for some women it was many years since the index birth), Bick & MacArthur (1995a) and Brown & Lumley (in press) surveyed the women six to seven months after birth whereas Glazener et al (1993a,1995) surveyed mothers in hospital, at eight weeks and a subset of women at 12 to 18 months following the birth. The difference in timing makes comparisons between the studies difficult.

Secondly, some researchers have asked women to report any symptoms they have experienced, others to report only symptoms that have been a problem. The wording of questions has differed; Bick & MacArthur ask about ‘extreme tiredness’ (Bick & MacArthur 1995a) whereas Brown & Lumley ask about ‘tiredness that has been a problem for you’ (Brown & Lumley in press).

Consequently, even using the two well conducted recent population based studies (Brown & Lumley in press; Glazener et al. 1995), the findings cannot be directly compared as there are subtle differences in wording of questions and the difference in timing of the surveys within the first postnatal year further complicates the issue. To enable comparisons between studies a standardised way of asking about physical problems is required. As there are definable physical problems that are common in the year after birth (back pain, tiredness, urinary incontinence) it is important that we have information about the actual conditions as well as how they affect the health status. Condition-specific questionnaires are needed, as well as multi-dimensional measures of well-being.
The time points at which this information is collected will vary depending upon the aim of the study. However, we require population data on key time points that can be compared throughout the first postnatal year. In this thesis the survey administered to mothers in the trial (Chapter 4) consists of items from the Brown and Lumley Survey of Recent Mothers project (Brown & Lumley, in press).

Taking into account the variation in reported prevalence rates it still remains true that at least half the recent mothers in our community experience physical problems. This rate is likely to be higher in the women presenting to general practitioners, although no studies have been undertaken to determine if this is the case. On reviewing the findings of Glazener et al (1993a; 1995) the Royal College of Obstetricians and Gynaecologists commented: ‘In no other form of health care would the identified levels of morbidity be considered normal or acceptable’ (Royal College of Obstetricians and Gynaecologists 1993). General practitioners have an opportunity at the routine postnatal check-up to ask about common physical problems as well as discuss emotional and social issues.

**Tiredness**

The high rate of tiredness among mothers has been dismissed as a normal consequence of mothering, by both mothers themselves and caregivers. Consequently, there has been little research in the area. Bick & MacArthur report 40% of the women surveyed complaining of extreme tiredness; of these 24% stated this was present ‘all of the time’, 42% ‘some part of each day’, and 23% ‘some days of each week’, leaving only 11% of women complaining of extreme tiredness ‘some days of each month’ or ‘occasionally’. On a visual analogue scale, in the same study, 67% of women rated the tiredness between 51mm and 100mm. Three quarters of the women reporting extreme tiredness commented that it affected their lives (Bick & MacArthur 1995a). A conservative estimate would predict that at least a third of the women
presenting to their GP in the year following birth would have a level of
tiredness that is impacting, negatively, on their lives. The impact that this has
on maternal well-being, relationships with partners, families and children is not
known.

One study focussing on haemoglobin levels after birth, has indirectly begun to
unravel the issue of tiredness after birth (Paterson et al. 1994). Any standard
medical textbook will list tiredness as a symptom of anaemia. Paterson and
colleagues found that low haemoglobin levels were associated with low energy,
breathlessness, faintness, tingling in the fingers/toes and painful perineal
sutures. They also found that other physical problems like backache, headaches
and minor viral illness were more common and the fact that these
findings did not reach statistical significance may be explained by the power of
the study to detect only very large differences. They concluded that the policy
for haemoglobin measurement in the postpartum should be reviewed.

Paterson’s call for review of haemoglobin testing policy is supported by the
study of Glazener et al which found that 18% of primipara and 12% of
multipara were anaemic in hospital but that at eight weeks this had risen to
31% of primipara and 21% of multipara (Glazener et al. 1995). For some
women their tiredness will be directly linked to their low haemoglobin level.
At first glance this appears to be a simple diagnosis to make and easy to treat
and should be able to be managed within general practice. The postnatal
check-up would seem a good time to suspect a diagnosis of anaemia and to
perform a blood test if clinically indicated. However, this area is far from clear.

Firstly, Australian studies are required to determine the degree of anaemia in
postnatal mothers in our communities. It is likely that due to differences in diet
the prevalence of anaemia would be less than found in the UK. Secondly,
Hytten, in an excellent comprehensive review of the clinical physiology of the
puerperium, indicates there is still much that is not understood (Hytten 1995).
Haemoglobin levels reach their lowest point on the fourth postpartum day and
then rise progressively to reach normal non-pregnant levels between four and six weeks postpartum (Hytten 1995). The main study from which he draws this conclusion was conducted in a technically excellent manner yet only 33 women were involved. Thirdly, Glazener et al (1995) found that more women were anaemic at eight weeks postpartum than in hospital (between 0-13 days).

The disparity in their findings could be influenced by a number of issues. Firstly, the fact that there is a transient rise in haemoglobin levels following birth and on the first postpartum day (Hytten 1995) and Glazener et al made measurements on any day between 0 and 13. Secondly, the small sample size in the study cited by Hytten and the influence of mode of delivery found by Glazener, where anaemia was more common in women who had an operative delivery. Thirdly, the possibility that the attention to the technical detail of blood taking in the study cited by Hytten was not followed in the large population based study undertaken by Glazener. Although the explanation for the difference in findings between these studies is not clear it demonstrates the need for further research in this area. If general practitioners are to identify and manage anaemia reliable information is required on the best time in the postpartum to test for anaemia, the cut-off to be used in defining anaemia and when to recommend iron supplementation.

It may appear tempting to suggest routine iron supplementation as an answer to this problem. However, in pregnancy routine iron supplementation is not recommended as studies have failed to show any benefits (measured as reduction in proteinuric hypertension, antepartum or postpartum haemorrhage, maternal infection, preterm birth, low birthweight, stillbirth or neonatal morbidity or subjective well-being) and two well conducted trials have shown an increase in the prevalence of preterm birth and low birthweight (Enkin et al. 1995). It is disappointing to note that the studies have not included postnatal maternal morbidities as outcome measures. Further studies are needed to explore the interaction between postnatal haemoglobin levels and physical problems.
The case-control study by Paterson et al (1994) was designed to look at the link between anaemia and postnatal depression. Unfortunately, even though they calculated that 1000 women would be required to examine such a link, they only obtained complete data from 528 women. Low haemoglobin and anaemia were not associated with an increase in depression, although the rate of depression was 3% higher in the anaemic group. Their study had sufficient power (80%) to detect a doubling in the rate of depression from 7% to 14%. It is unlikely, considering the complexity of causes in postnatal depression (Section 1.2.3) that anaemia would account for 50% of cases. Anaemia as a possible factor in postnatal depression requires further study.

Tiredness is one of the most frequently reported reasons for seeing a general practitioner. In 100 encounters in the general practice treatment and morbidity survey 2.6 were for tiredness (Bridges-Webb et al. 1992). Sixty-four percent of these encounters were with women, although it is not known how many of them were presenting with the problem in the year after childbirth.

The figures quoted from the Bridges-Webb et al study could be an underestimate, as GPs providing less than 1500 services per year were excluded from the sampling frame for the study. The number of GPs this excludes is not known, however, part-time females working 3 sessions or less and taking 4 or more weeks annual leave per year would be likely to be excluded. This group is likely to see an over-representation of postnatal women and hence the inclusion of postnatal problems in the Bridges-Webb et al study is likely to be under-represented. Nevertheless, the Bridges-Webb study provides valuable information about the nature of Australian general practice and identifies that tiredness as a presenting complaint is part of routine general practice. General practitioners should be able to manage tiredness after birth, although it may involve some re-orientation of their usual approach to this problem.
Backache was a problem for 44% of Australian women surveyed six to seven months after birth (Brown & Lumley in press). This is similar to the prevalence (46%) rate found by Bick & MacArthur (1995a) at the same time-point. In the Bridges-Webb et al (1992) survey back complaints were the fifth most common reason for visiting a GP; accounting for 3.8 consultations out of every 100 in the general practices surveyed. Backache is an expensive public health problem, costing the US $25 billion annually (Flavell et al. 1996).

The idea that backache is common after childbirth is not new. Browne (1937) cites backache as a common postnatal problem. However, backache in postnatal women has not been widely researched. Most of the published research has been in relation to whether epidural anaesthesia causes an increase in long term backache (MacArthur et al. 1990; Russell et al. 1996; Russell et al. 1993).

Grove undertook a hospital-based survey of women not having epidural anaesthesia to examine the prevalence of backache following childbirth (Grove 1973). He notes with great surprise that 40% of women having a spontaneous vaginal birth reported backache in the first four days following birth after which he reports that the backache ceased. However, the follow-up was for six days after birth and the possibility of recurrence after this time was not studied. MacArthur et al, in their large retrospective survey of 11,701 women giving birth at a maternity hospital in Birmingham between 1978 and 1985, found that 23% of women reported backache occurring within three months of delivery and lasting for more than six weeks (MacArthur et al. 1990). Women who underwent epidural anaesthesia were 1.8 times more likely to report backache; which the authors suggest is likely to indicate a causal link between epidural anaesthesia and backache. Another retrospective survey in the UK reported a similar finding (Russell et al. 1993) and a recent Australian study found that women who had epidural anaesthesia were 1.5 times (95% CI=1.2-2.0) more
likely to report a history of backache six to seven months after childbirth (Brown & Lumley in press).

These studies are weakened by the fact that they were retrospective and that for some women they were asked to recall events from many years before as to whether their backache preceded labour or not. A prospective study by Russell et al failed to demonstrate an increased incidence in new long term backache (Russell et al. 1996). However, women with a history of backache were excluded from the analysis. Hence, this study did not address the issue of whether epidural anaesthesia increases the risk of recurrence or the duration of backache. Other factors which may have influenced the findings of Russell et al were that women who did not have epidurals were less likely to respond to follow-up postal surveys (66% vs 80% of women having epidurals) and the sample size obtained for analysis allowed only sufficient power (80%) to detect more than a doubling in rates of backache between the groups from 6.9% to 17%. In the retrospective study by MacArthur et al (1990) new backache was present in 18.9% of women who had epidural anaesthesia and only 10.5% of women who did not have an epidural. It would seem reasonable to suggest that the difference found in a prospective survey is likely to be less. However, from Russell’s study it appears that epidurals are not responsible for more than doubling the incidence of new long-term backache and a Canadian case-control study by Macarthur et al (1995) supports these findings.

Other studies investigating the multitude of likely contributory factors other than epidural anaesthesia such as: antenatal exercise programs, birthing positions, management of labour, antenatal and postnatal backcare programs, breastfeeding posture, design of nursery furniture, baby slings and infant car restraints, are required to inform the practitioner on ways to prevent backache following birth and the best way to manage backache when it occurs. These studies should be designed recognising the complex nature of longterm backache with attention to the biopsychosocial pain model (Fordyce 1988).
Postnatal sexual problems are common and it may take some months for the resumption of normal sexual activity after childbirth (Glazener 1997; Lumley 1978).

In the recent Australian study by Brown and Lumley (in press) 26% of women reported a problem with sex. The Grampian study by Glazener (1997) asked more detailed questions about sex at eight weeks and twelve to eighteen months after childbirth. By eight weeks 71% of the women reported having sexual intercourse, 25% had not tried and 5% had attempted intercourse but stopped due to a problem. By twelve to eighteen months 95% of women with partners reported having intercourse, although half of them reported that they had encountered at least one problem related to resuming intercourse: tiredness and pain were the two most commonly reported problems (Glazener 1997).

Little research has been undertaken to establish the causes for the tiredness and pain that are associated with sexual problems in the postpartum. Once again it is likely that the problems have been ‘normalised’ and accepted as a natural consequence of childbirth. Perineal pain has been the focus of some studies and there is evidence to suggest that pain relief in the puerperium could be better managed by the more routine use of mefenamic acid and non-steroidal anti-inflammatory drugs rather than paracetamol (Dewan et al. 1993). An intensive pelvic floor exercise program may be of benefit (Sleep & Grant 1987a). The use of more effective pain relief for perineal pain in the early postnatal phase may have an effect on the resumption of sexual activity and should be investigated. The liberal use of episiotomy has been associated with higher rates of postnatal sexual dysfunction in a North American randomised controlled trial (Klein et al. 1994) and a longer time taken to resumption of intercourse (Sleep et al. 1984) although, it does not appear to increase longterm dyspareunia (Sleep & Grant 1987b). The liberal use of episiotomy can no longer be justified (Sleep et al. 1984) due to the negative impact on short to medium term sexual function.
The finding that fewer than half the women experiencing perineal pain and/or tiredness are likely to seek help from a health professional (Glazener et al. 1995) requires GPs to be active in asking women about these problems (along with the other common problems) at the postnatal check-up. General practitioners are well positioned to address these issues as 78% of the women who sought help in Glazener’s recent study did so from a GP (Glazener 1997).

**Constipation and haemorrhoids**

Around a quarter of women will experience problems with haemorrhoids (Brown & Lumley in press) and/or constipation (Glazener et al. 1995) and only a half will seek professional advice (Glazener et al. 1995). General practitioners are well placed to deal with this common problem yet there has been little research into this area. Diet, breastfeeding, exercise, intrapartum and postpartum choice of analgesia, intrapartum management, perineal trauma and episiotomy may all play a part in this common problem for mothers. Research needs to be undertaken to examine the interplay of these factors in postpartum bowel problems to enable GPs to use an evidence based management approach.

**Urinary incontinence**

Urinary incontinence is a concerning problem for women and reliable information about the causative factors (Yarnell et al. 1982) and the most effective management strategies is lacking (DeLancey 1996; Thomas et al. 1980). Prevalence rates vary due to the timing of the study in relation to birth and the wording of the question. Brown and Lumley report 10.7% of women stating it as a problem (Brown & Lumley in press); Bick and MacArthur report 22% of women experiencing incontinence at six to seven months (Bick & MacArthur 1995a); Glazener et al report 8% women experiencing incontinence at twelve to eighteen months after the birth (Glazener et al. 1995). Many women accept leakage of urine as common and therefore not serious and hence may not seek help (Jolley 1988), even if it is interfering with life (Yarnell et al. 1981); this is true of women following childbirth (Glazener et al. 1995).
The West Berkshire perineal management trial in the UK showed that the use of episiotomy did not increase rates of urinary incontinence at three months postpartum (Sleep et al. 1984) or at the three year follow-up (Sleep & Grant 1987b). Forceps delivery, multiparity and prolonged second stage of labour have been associated with pudendal nerve damage and subsequent urinary incontinence (Snooks et al. 1986; Snooks et al. 1990). Few randomised trials of management of urinary incontinence have been undertaken. Sleep and Grant reported that intensive instruction of pelvic floor exercises was no more effective than routine instruction in decreasing the prevalence or severity of urinary incontinence (Sleep & Grant 1987a). An observational study reported that a treatment regime of pelvic floor exercises, electrostimulation, oestrogen, anticholinergic drugs, bladder training and protective pads was successful in a general practice setting (Seim et al. 1996). Whilst this shows promise, randomised controlled trials should be undertaken to establish the likely effectiveness of such a complicated program.

Breastfeeding problems

In Victoria, 1992-93, 76% of mothers were breastfeeding their babies when discharged from hospital. At three months of age 58% of babies were fully or partially breastfed, dropping to 43% at six months of age (Health and Community Services 1994). Whilst these figures are higher than those found in other Western countries (Campbell 1996; Emery et al. 1990; Ryan et al. 1991) they fall short of the national target to breastfeed 80% of babies, fully or partially, until three months of age by the year 2000 (Nutbeam et al. 1993).

Breastfeeding is promoted for babies because it prevents gastroenteritis and respiratory infections (Howie 1990; van den Bogaard et al. 1991). Breastmilk contains long chain polyunsaturated fatty acids, essential nutrients for the development of the central nervous system (Makrides et al. 1995), which may result in long term health effects. Beneficial effects on cognitive development have been reported (Lanting et al. 1994; Rogan & Gladen 1993) as well as a contraceptive effect (Flynn 1996).
Most women stop breastfeeding due to perceived problems with milk supply, frequent feeding, baby irritability and nipple pain (Grassley & Davis 1978; West 1980). An increase in breastfeeding support in the postpartum has been suggested as a way to improve breastfeeding continuation rates (Campbell 1996; Graffy 1992b; Lawrence 1994) as many women encounter problems in the first few weeks (Graffy 1992a; Grassley & Davis 1978).

Graffy found that women were more likely to see a GP about nipple pain than perceived low milk supply (Graffy 1992a). Family physicians do encourage breastfeeding, but only if the mother initiates the discussion and physicians vary widely in their ability to deal with breastfeeding problems (Lawrence 1982). Lawrence’s study was limited by a 50% response rate and may not be representative of US family practitioners. Another study in the US shows that whilst family physician trainees support breastfeeding they lack the knowledge to deal with common breastfeeding problems (Goldstein & Freed 1993).

Redman et al (1995) reported on an Australian intervention to increase breastfeeding rates of first time mothers. This intensive intervention, delivered by midwives, consisted of an antenatal education session, a postnatal visit in hospital, a phone call at two to three weeks, a group session at six to eight weeks and phone support and home visits if requested. The control group received standard hospital care. The intervention was successfully implemented: most women allocated to the intervention group received the intervention and most felt it had been helpful. There was no significant difference in breastfeeding rates between the groups (Redman et al. 1995). However, the study is limited by the fact that they sequentially allocated women to control or intervention group on the basis of odd/even numbered consent forms rather than true random allocation and the sample size was too small to detect the desired benefit. The final sample size of 132 women had only 62.8% power to detect a 15% difference between the groups. The breastfeeding rate was 3% higher in the intervention group yet this was not statistically significant. To detect a small difference such as this would have
required a study of more than 5000 women and Redman et al stated that due to the intensity of the intervention a 15% increase would be necessary to justify the likely cost; although no formal economic evaluation was done.

This thesis provides information on how Australian GPs perceive their role in breastfeeding (Chapter 3) and tests, via a randomised trial, whether early review by a GP can increase breastfeeding rates (Chapter 4). The early visit was scheduled to co-incide with the time when many women experience difficulties establishing breastfeeding and provided GPs with the opportunity to provide support, management or appropriate referral of any identified problems.

Postpartum smoking


These findings have the potential to act as a strong motivation for maintenance of smoking cessation. However, the postpartum period is characterised by physical and emotional demands which may spark a return to smoking. Lumley (1995) raised concerns that the campaign against smoking in pregnancy has made many women feel guilty and inadequate and recommended that
Interventions should focus on self-help and behavioural strategies rather than advice. A recent randomised trial found that cognitive behavioural strategies were effective in reducing the number of women recommencing smoking in the postpartum (Walsh et al 1997), although follow-up was only continued until six weeks after childbirth. It has been shown that women with partners and friends who smoke are more likely to relapse to smoking postpartum (Dolan-Mullen 1997).

General practitioners can be successful at reducing smoking rates in their practices (Richmond and Webster 1985, Richmond et al 1986, Slama et al 1990, Russell et al 1983, Russell et al 1993) and more than seventy percent of smokers report ‘wanting to quit’ (Mullins and Borland 1996). Interventions which aim at supporting recent mothers and reducing morbidity, as well as providing strategies for her and her partner to stop smoking, may be more successful at maintaining smoking cessation than programs that focus mainly on smoking behaviour. There is literature to suggest that the early postpartum period is not too late to encourage women to remain a non-smoker (McBride et al 1992, Brenner 1993). However, more research into relapse prevention is required (Walsh et al 1997).

*Thyroid problems*

Since the 1980’s it has been recognised that many women experience a mild and transient thyroid dysfunction in the early months following childbirth due to an autoimmune thyroiditis (Hytten 1995). Prevalence rates ranging from four to nine percent have been reported (Jansson et al 1988, Fung et al 1988). Most women with thyroid dysfunction experience a transient hyperthyroidism followed by a period of hypothyroidism which remits spontaneously in seventy percent of women (Othman et al 1990). Up to thirty percent of women who develop thyroid dysfunction will require lifelong thyroxine therapy (Othman et al 1990). The literature on thyroid disease has focussed mainly on the biochemical findings of thyroid dysfunction and not on how these findings relate to maternal symptoms and well-being. Another limitation is the small
number of women included in the studies which limits the ability to determine risk. One study reports that thyroid dysfunction is associated with an increase in depression (Harris et al., 1992).

Thyroid dysfunction may be linked to the experience of tiredness in the postpartum yet more research is needed before routine screening could be recommended. General practitioners should be aware that thyroid dysfunction is possible after childbirth and biochemical tests of thyroid function may be required on an individual basis.

1.2.2 Measuring health and wellbeing

As presented above maternal morbidity is high in the year after birth. There is a wide variety in the types of morbidities encountered; from physical complaints to emotional and social issues. In order to evaluate interventions designed to reduce these diverse morbidities (such as the trial reported in Chapter 4) we need reliable outcome measures that are easy to use and not specific to a particular condition. In recent times there has been much work undertaken to design a standardised self-report survey able to measure outcomes from the patients viewpoint (Ware 1993).

The Short Form 36 (SF 36) health survey questionnaire is used as an outcome measure in the trial reported in Chapter 4. The SF 36 was chosen as it is brief, yet not limited by allowing only one questionnaire item per concept or domain of interest (Ware & Sherbourne 1992). The SF 36 is comprehensive in attempting to measure multidimensional health concepts as well as measuring the full range of health states (McHorney et al. 1993). It performs well when administered by postal survey with good item-completion rates (88%-95%) and acceptable reliability co-efficients (range from 0.65 to 0.94) across the scale (McHorney et al. 1994).
Although it was developed in the United States it has been successfully used in the United Kingdom where a number of authors note its potential for use in measuring outcomes in primary care (Brazier et al. 1992; Garratt et al. 1993; Jenkinson et al. 1993; Lyons et al. 1995) and suggest it may be suitable for use in Australia (Ware 1993). The SF 36 has been validated for use in Australia (McCallum 1995) however it has not previously been used with women following childbirth.

Whilst Ziebland has noted concerns about using the SF36 as a measure of health gain within heterogenous communities it shows promise as an outcome measure between homogenous treatment groups, such as those encountered in randomised controlled trials (Ziebland 1995). In postnatal care the interplay between mental and physical health is most interesting. Psychometric testing shows that the physical functioning and mental health scales of the SF 36 are ‘relatively pure’. This means that if observed differences are found between the mental and physical sub-scales as a result of an intervention, then it can be interpreted, with a high degree of confidence, that physical or mental causes were responsible for the difference (McHorney et al. 1993). Having this discriminatory power made the SF 36 particularly suited to the needs of this research as well as providing a multidimensional assessment of health by including measures of role and social disability, vitality, and perceptions of health (McHorney et al. 1993). Also, the SF 36 has been reported as preferable for measuring improvements in health of relatively minor conditions such as those found in general practice (Julious et al. 1995). This was an important consideration in choosing the SF 36 for this study as many of the common postnatal morbidities could be considered relatively ‘minor’, eg: haemorrhoids, tiredness.

The SF36 is a multi-item scale that assesses eight health concepts:
1) limitations in physical activities because of health problems;
2) limitations in social activities because of physical or emotional problems;
3) limitations in usual role activities because of physical problems;
4) bodily pain;
5) general mental health;
6) limitations in usual role activities because of emotional problems;
7) vitality (energy and fatigue); and
8) general health perceptions (Ware & Sherbourne 1992).

For each survey item scores are coded, summed and transformed to a scale from 0 to 100, where a higher score indicates a better health status (Medical Outcomes Trust 1994).

1.2.3 Depression after birth

Depression after birth has been the most commonly researched postnatal problem. Most of the published papers report observational studies, with varying degrees of methodological rigour, designed to establish the prevalence of and factors associated with the development of postnatal depression. There has been considerable controversy over the definition of postnatal depression, the prevalence of postnatal depression and the factors associated with the development of postnatal depression. It is beyond the scope of the background presented here to give detailed accounts of all the work that has taken place. Instead, an overview of the key findings and the relevance to the work presented in this thesis is given.

There are a number of problems with the published literature on postnatal depression. Firstly, most studies have used hospital based antenatal clinics to recruit women, using a variety of sampling techniques and eligibility criteria (Cox et al. 1982; Dalton 1971; Kumar & Robson 1984; Pitt 1968; Watson et al. 1984), introducing a selection bias which makes it difficult to interpret the prevalence results obtained. Secondly, studies have been undertaken at different time points in the pregnancy and postnatal year, using different ways of diagnosing depression: some have used detailed psychiatric interviews, some time-limited interviews, others self-report questionnaires. Thirdly, the definition of depression has differed according to the particular study. All these factors make the prevalence rates reported in these studies; which range
from 2.9% (Tod 1964), through 10.8% (Pitt 1968), and 14% (Kumar & Robson 1984), to 16% (Cox et al. 1982; Watson et al. 1984), difficult to interpret in relation to the population of women giving birth. Added to this is the fact that most studies included only small numbers of women who met the criteria of being depressed and hence, result in studies with insufficient power to adequately explore the associated factors. However, this has not prevented the authors from commenting on factors they believed were likely to be causal. These issues go some way to explaining why there has been so much controversy over the factors associated with depression after birth.

An example of a controversial area in postnatal depression research is the role of hormonal factors in the development of postnatal depression. For example, Dalton has strongly hypothesised that a sharp drop in the circulating progesterone in the puerperium influences postnatal depression (Dalton 1971; Dalton 1980). There has been no empirical evidence to support this and the work that Dalton (1971) reported included only 14 women who developed postnatal depression. Pitt, in contrast, using a case-control study design with 33 cases and 54 controls, concluded that endocrine factors were unlikely to be involved, yet stated that women who became depressed had more neurotic tendencies than their counterparts (Pitt 1968). The small number of cases used to identify associations limits the findings of both these studies.

To enable large population based studies to be undertaken in a cost-effective manner a methodology other than psychiatric interview must be used due to the practical issues surrounding such research. The self-administered questionnaire has been used as a method in population based studies (Astbury et al. 1994; Feggetter et al. 1981; Webster et al. 1994) to facilitate the screening of larger numbers of recent mothers. Feggetter et al (1981) estimated a prevalence of likely postnatal psychiatric disorder of 19.7% using the General Health Questionnaire (GHQ) and Astbury et al (1994) cite a prevalence rate of postnatal depression of 15.4% using the Edinburgh Postnatal Depression Scale (EPDS). Despite the problems with research methodologies used in prevalence
studies of postnatal depression it has been noted that when one looks at the confidence intervals for the prevalence rates obtained by the studies virtually all report overlapping estimates somewhere between 10% and 20% (Lumley 1993). Therefore, postnatal depression is a major public health problem and general practitioners are likely to see many women in any year that will be experiencing this disabling mood disorder.

The self-report questionnaire relies upon the validity and reliability of the instruments used. Use of the GHQ in the postnatal phase is not ideal, as women tend to score highly due to the emphasis on the somatic symptoms of depression such as tiredness, lack of sleep and lack of interest in sex (Cox et al. 1987). Hence, use of the GHQ is likely to overestimate the prevalence of postnatal depression (Nott & Cutts 1982). Similar problems have been reported with the use of other self-report scales for depression such as the Beck Depression Inventory, the Hamilton Depression Rating Scale, the Pitt and the Zung (Boyce et al. 1993).

The EPDS has been developed as a 10-item self-report scale to identify postnatal depression in the community (Cox et al. 1987). It is simple, easy to use and performs well compared with psychiatric interview; having sensitivity rates of 86% (Cox et al. 1987), 95% (Harris et al. 1989), 68% (Murray & Carothers 1990), 100% (Boyce et al. 1993) and specificity rates of 78% (Cox et al. 1987), 93% (Harris et al. 1989), 96% (Murray & Carothers 1990), 96% (Boyce et al. 1993) in the community setting. It has been used extensively in the UK, where it was developed, and has been validated for use in Australia (Boyce et al. 1993) where it has been incorporated into a number of studies involving recent mothers (Astbury et al. 1994; Barnett et al. 1993; Stamp & Crowther 1994). The EPDS is included as an outcome measure in the randomised trial of an early postnatal check-up presented in Chapter 4 of this thesis.
General practitioners should be able to identify women who are depressed and institute an appropriate management plan. There has been little research published detailing the role of the GP in dealing with women experiencing depression after birth. However, there have been many studies published investigating the prevalence and management of depression, at various life-stages, in general practice. Some important points can be obtained from this literature which are likely to apply to depression after birth.

Depression is a serious, yet common medical condition, often of a prolonged duration that results in psychosocial and physical morbidity (Hirschfeld et al. 1997). General practitioners, like other health professionals, under-diagnose and under-treat depression in the patients they encounter (Harris et al. 1996; Paykel & Priest 1992). Simply alerting GPs to the fact that a particular patient has scored as depressed on a screening questionnaire, such as the Beck Depression Inventory, has been shown to increase the likelihood of a GP making the diagnosis of depression (Dowrick 1995). However, it has not been found to alter patient outcomes (Dowrick & Buchan 1995). The study by Dowrick and Buchan was conducted as a randomised controlled trial. Unfortunately, patients from both the control group and intervention group were likely to visit the same GP, as only two practices and nine GPs were involved. This introduces the possibility of significant treatment group contamination (Donner et al. 1990). It would have been more appropriate for the trial to employ cluster randomisation. The Dowrick and Buchan study was also limited by the fact that the researcher was not blind to the group allocation when conducting the analysis, the baseline BDI was completed in the surgery whilst the follow-up BDI’s were sent as postal surveys. Evidence of diagnosis and intention to treat were made by casenotes review, which may have under-represented the actual situation.

It has been shown that women presenting with physical illness as well as experiencing depression are likely to have their depression missed by the GP in contrast to women who present with depression in the absence of physical
illness (Tylee et al. 1993). This has implications for recent mothers attending the GP as they often have physical problems, which would make the diagnosis of depression by their GP less likely to occur. It may be that structural issues contribute to this disparity. In-depth interviews with 19 GPs in the UK found that the issues of lack of time and energy were the reasons the GPs gave for not investigating the possibility of psychological distress (Howe 1996). This study is limited by the small sample size and the fact that GPs expressed an interest in the study area. However, it raises important issues which may go some way to explaining the under-recognition of depression. Another factor which is likely to contribute to the under-recognition of depression after birth is that whilst women who experience the condition will realise there is ‘something’ wrong, only one third will call their experience ‘depression’ (Whitton et al. 1996).

If the difficulties in recognising depression and facilitating disclosure could be overcome in general practice, it is likely that GPs would be able to manage effectively many of the recent mothers experiencing depression within the current general practice framework in Australia. Eight, weekly, half-hour sessions of active listening has been shown to reduce depression in women identified as depressed by the Edinburgh Postnatal Depression Scale (Holden et al. 1989) and six sessions of simple cognitive behavioural therapy is as effective as an antidepressant drug (Appleby et al. 1997). Whitton et al (1996), in a study involving 78 women with depression after birth, found that 60% would consider psychological management and only 19% would consider pharmacological treatment. These management strategies could easily be used by general practitioners and women could choose between a ‘talking therapy’ and a drug therapy after considering the pros and cons of each.

Only one third of women experiencing depression after birth will seek professional help (McIntosh 1991) and for the majority of them they will turn to general practitioners and maternal and child health nurses (Brown et al. 1994). The survey data presented in Chapter 3 provides information on the
views of general practitioners about their role in the detection and management of depression after birth.

1.3 Researching the role of the GP in postnatal care

The key questions to be answered by this thesis are:

- Are general practitioners involved in the care of mothers and babies in the early weeks and months after birth? (Chapter 2)
- What do general practitioners believe should take place at the routine postnatal check-up? (Chapter 3)
- Can an earlier postnatal check-up improve maternal health? (Chapter 4)
- Is the current focus of the routine postnatal check-up likely to improve maternal health? (Chapter 5)

Chapter 2 uses routinely collected data from the Health Insurance Commission to describe the use of general practice services in the six months after birth. Chapter 3 uses data collected from a Statewide postal survey of general practitioners to provide information on how GPs view their role. Chapter 4 reports an intervention designed to improve maternal health using a randomised trial design. Chapter 5 uses data collected by postal survey from general practitioners and from women in the control group of the trial to determine if the current postnatal check-up is targeting the areas of concern.

The use of these different methods provides a broad picture of postnatal care in general practice and enables the views of general practitioners and women to be discussed in the context of the published literature. Chapter 6 synthesises the findings and discusses recommendations for improvement of general practice postnatal care.
1.3.1 Methods used to search the literature

A variety of methods were used to search the published and unpublished literature for information on postnatal care and related topics. Firstly, Medline and PsychLit searches were undertaken to identify any published literature (1963 to present) using the keywords of general practice/family practice, general practitioner/family physician, postnatal/postpartum care, shared obstetric care / antenatal care, obstetric care, postnatal check-up. Searches were done to identify information on the specific morbidities (eg: postnatal depression, backache) and instruments (eg: Short Form 36). Secondly, references were identified from the reference list of articles retrieved from the Medline search. Thirdly, key journals such as the British Journal of General Practice, Family Practice, American Family Physician, British Journal of Obstetrics and Gynaecology, Australian and New Zealand Journal of Obstetrics and Gynaecology, Medical Journal of Australia, British Medical Journal and Australian Family Physician were hand-searched (1980 onwards) for relevant articles. Fourthly, the Cochrane Library on CD ROM was searched for articles and trials relevant to postnatal care, only a few were identified. Fifthly, articles which were unpublished or not listed on electronic databases were sourced via personal networks. Sixthly, a hand search of the historical collection of the Royal Australian College of Obstetricians and Gynaecologists revealed two key texts which led to the discovery of the two early papers on postnatal care. Finally, a hand search of the current texts on Obstetrics and Midwifery housed in the Medical Library of the University of Melbourne and the Royal Women's Hospital Melbourne identified the paucity of information on specific aspects of maternal health.
CHAPTER TWO

USE OF GENERAL PRACTITIONER SERVICES IN THE SIX MONTHS AFTER BIRTH

CONTENTS

2.1 Background
2.2 Method
2.3 Results
   2.3.1 Visits to General Practitioners
   2.3.2 Mothers' visits
   2.3.3 Babies' visits
   2.3.4 Length of visit
2.4 Discussion
   2.4.1 Limitations of study
   2.4.2 General practice visits
   2.4.3 Length of consultation
   2.4.4 Six week postnatal check-up
2.5 Conclusions

2.1 Background

Physical health problems such as back pain, exhaustion, lack of sleep, anaemia and haemorrhoids are common after birth (Bick & MacArthur 1995a; Brown & Lumley in press; Glazener et al. 1995). Breastfeeding rates are below target levels (Health and Community Services 1994). Between 10% and 20% of women will be depressed in the year after birth (Astbury et al. 1994). Therefore, it is reasonable to expect that recent mothers and their babies will visit medical practitioners following childbirth and that the level of use of such services may be an indirect measure of the level of morbidity, using a broad definition of health, following childbirth. Of course, the use of health services is also determined by cultural and social norms. There are no published

1 The data presented in this chapter were published as a paper ‘Visits to medical practitioners in the first six months of life’ Journal of Paediatrics and Child Health (1996) 32:162-66. Permission to include the paper in this thesis has been granted by Blackwell Scientific Publications.
Australian data detailing visits to medical practitioners following childbirth and no data for other countries were found using a Medline search.

In view of the high level of postnatal morbidity in our community, this study was undertaken to determine the level of involvement of general practitioners in postnatal care of women and babies, in the six months after birth. The study follows on from previous qualitative research that outlined the views of general practitioners about shared antenatal and postnatal care (Halloran et al. 1992).

2.2 Method

Aggregated Medicare data (to address confidentiality issues) were obtained from the Health Insurance Commission for a random sample of 650 Victorian babies born between March 1st 1993 and May 31st 1993 and their mothers (4% of all births in this time period). The data detailed all Medicare services provided in the six months following birth for the mothers and the babies. Only services charged as ‘Professional Attendances’ are detailed. However, the way in which the data were supplied meant that services for individual mothers or babies could not be identified. It was therefore not possible to determine for an individual if they had received none, one or many services in any given week. As well, data for individual mothers could not be linked to data for their individual babies. So it was not possible to look at the frequency of visits for a particular mother, a particular baby or a mother/baby dyad.

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2The Australian Medicare Program is a government funded health care system which provides access to medical and hospital services for all Australian residents and certain categories of visitors to Australia. The Medicare program provides automatic entitlement to benefits equal to 85% of the Medicare Benefits Schedule fee. Medical practitioners provide services on a ‘fee-for-service’ basis and can either charge the patient (who later claims back 85% of the scheduled fee from the Medicare Program) or the Australian Medicare Program (the doctor can ‘bulkbill’ Medicare for 85% of the scheduled fee).

3Professional attendance means the personal attendance of the medical practitioner upon the patient, which includes services provided by medical practitioners in their rooms, in the patients home and hospital visits to private patients.
Data were received as a hard copy print out, in table form, detailing all Medicare services by item number according to the Medicare Benefits Schedule for mothers and babies in the weeks one to twenty-six from birth. Services provided to privately insured women, up to nine days following birth, are not included in this paper as they are included in the total obstetric fee. It is not possible to determine how many postnatal visits were provided as a part of that service, in addition to those described here. Also excluded from this data set are visits to hospital accident and emergency departments and public patient visits to hospital inpatient and outpatient services. Data on visits to these latter services are not available and it is not possible to estimate how often they would occur.

As well as services provided by medical practitioners women have access to a comprehensive maternal and child health service, staffed by specially trained nurses.

**Analysis**

Item numbers charged as ‘professional attendances’ by general practitioners, were entered into Excel 5.0 and analysed. Data were analysed using SAS and statistical significance was determined by calculating the $X^2$ test for independent sets of proportions.

**2.3 Results**

Six thousand four hundred and four ‘professional attendance’ services were provided to the 650 mothers and their babies in the six months following birth by medical practitioners under the Medicare Benefits Schedule. Three thousand six hundred and sixty-six (57%) services were provided to the babies and 2738 (43%) services were provided to the mothers. General practitioners provided 2296 (84%) services to mothers and 2746 (75%) services to babies, giving a total of 5042 services. Specialists provided 442 (16%) services to mothers and 920 (25%) services to babies, giving a total of 1362 services.
2.3.1 Visits to General Practitioners

The total number of general practice services provided to the 650 mothers and 650 babies in the six months following birth was 5042; 2296 services to mothers and 2746 visits to babies. This equates to 3.5 visits for a woman and 4.2 visits for a baby to a general practitioner in the six months following birth. It is probably artificial to separate mother and baby services in the early months following birth. For example; a mother seeking advice from a general practitioner about a crying baby could have that visit charged either to herself or to her baby depending upon the context of the visit. For this reason it would seem appropriate to refer to visits of the mother/baby dyad. Therefore, if the total number of services provided by general practitioners (5042) is divided by the number of mother/baby dyads (650) the mean number of visits to a GP for a mother/baby dyad in the six months following childbirth is calculated as 7.7 visits.

Figure 2.1: General practitioners services to 650 mothers in the six months following childbirth

2.3.2 Mothers’ visits

Figure 2.1 shows details of the 2296 Medicare services general practitioners provided as 'professional attendances' to mothers in the first six months
following childbirth. Ninety-eight percent (2241) of services were provided during ordinary hours at the general practitioners’ consulting rooms; 82% (1835) of visits were provided by Vocationally Registered (VR)\textsuperscript{4} general practitioners and 18% (406) of visits by non-VR general practitioners. In a random sample of general practice consultations in 1993 one would expect to find that about 36% were provided by non-VR general practitioners (personal communication, Department Human Services and Health). Table 2.1 shows the item numbers for consultations during ordinary hours.

Table 2.1: Mothers’ visits to general practitioners according to Vocational Registration status

<table>
<thead>
<tr>
<th>Item Number</th>
<th>VR GP</th>
<th>Non-VR GP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Visits (%)</td>
<td>Number of Visits (%)</td>
</tr>
<tr>
<td>3 or 52\textsuperscript{a}</td>
<td>25 (1.4)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>23 or 1666\textsuperscript{b}</td>
<td>1666 (90.8)</td>
<td>358 (88.2)</td>
</tr>
<tr>
<td>36 or 54\textsuperscript{c}</td>
<td>130 (7.0)</td>
<td>26 (6.4)</td>
</tr>
<tr>
<td>44 or 57\textsuperscript{d}</td>
<td>14 (0.8)</td>
<td>21 (5.2)</td>
</tr>
<tr>
<td>Total</td>
<td>1835</td>
<td>406</td>
</tr>
</tbody>
</table>

\textsuperscript{a}: 3=short history and limited examination, 52=brief consultation <5 minutes
\textsuperscript{b}: 23=selective history, examination & management plan OR <20 minutes, 53=standard consultation <25 minutes
\textsuperscript{c}: 36=detailed history, examination & management plan at least 20 minutes and <40 minutes, 54=long consultation <45 minutes
\textsuperscript{d}: 44=exhaustive history, examination & management plan at least 40 minutes, 57=prolonged consultation at least 45 min

Consultations outside the general practitioner’s clinic were rare. Home visits accounted for only 1.1% (26) of services with 92% (24) provided by VR general practitioners. One percent (23) of services were provided as after hours emergency visits but it was not possible to determine the percentage of VR versus non-VR general practitioners providing these services. Hospital visits accounted for 0.3% (6) of services provided by general practitioners.

\textsuperscript{4}A Vocationally Registered GP refers to a medical practitioner who practices predominantly in general practice and has appropriate training and experience in general practice as determined by the Royal Australian College of General Practitioners or the Vocational Registration Eligibility/Appeal Committee. These practitioners have access to content-based rather than time-based fee for service rebates for their patients.
Table 2.2: Babies’ visits to general practitioners according to Vocational Registration status

<table>
<thead>
<tr>
<th>Item Number</th>
<th>VR GP</th>
<th>Non-VR GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRGP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Visits (%)</td>
<td>Number of Visits (%)</td>
<td></td>
</tr>
<tr>
<td>3 or 52⁴</td>
<td>86 (3.9)</td>
<td>6 (1.2)</td>
</tr>
<tr>
<td>23 or 53⁵</td>
<td>2061 (93.7)</td>
<td>469 (96.1)</td>
</tr>
<tr>
<td>36 or 54⁶ / 44 or 57⁷</td>
<td>52 (2.4)</td>
<td>13 (2.7)</td>
</tr>
<tr>
<td>Total</td>
<td>2199</td>
<td>488</td>
</tr>
</tbody>
</table>

X² = 8.77, df=2, p<0.01
X² was used to compare the 'pattern' of charging between VR and non-VR doctors

2.3.3 Babies’ visits

General practitioners provided 2746 Medicare services as 'professional attendances' to babies in the first six months of life (Figure 2.2). Services provided during ordinary hours in general practitioners consulting rooms made up 97.9% (2687) of all services; 82% (2199) by VR general practitioners. Table 2.2 shows the item numbers for consultations during ordinary hours. Home visits and emergency after hours visits accounted for 0.9% (24) of services respectively and hospital visits for 0.4% (11) of services.

Figure 2.2: General practitioners services to 650 babies in the first six months of life
2.3.4 Length of visit

The length of consultation for babies differed significantly from that provided to mothers suggesting that babies receive shorter consultations (Table 2.3). \( (X^2=124.4, df=3, p<0.001) \)

Table 2.3: Length of GP consultations: mothers versus babies

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Mothers' visits (%)</th>
<th>Babies' visits (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or 52a</td>
<td>26 (1.2)</td>
<td>92 (3.4)</td>
</tr>
<tr>
<td>23 or 53b</td>
<td>2024 (90.3)</td>
<td>2530 (94.2)</td>
</tr>
<tr>
<td>36 or 54c</td>
<td>156 (6.9)</td>
<td>64 (2.4)</td>
</tr>
<tr>
<td>44 or 57d</td>
<td>35 (1.6)</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>2241</td>
<td>2687</td>
</tr>
</tbody>
</table>

a: 3=short history and limited examination, 52=brief consultation <5 minutes
b: 23 =selective history, examination & management plan OR <20 minutes, 53=standard consultation <25 minutes
c: 36=detailed history, examination & management plan at least 20 minutes and <40 minutes, 54=long consultation <45 minutes
d: 44=exhaustive history, examination & management plan at least 40 minutes, 57=prolonged consultation at least 45 min

2.4 Discussion

2.4.1 Limitations of study

The data presented here account only for Medicare services. Visits made prior to day nine postpartum to privately insured women do not appear as they should be included in the total obstetric fee. These data do not provide information about visits made to public hospitals (accident and emergency services, outpatient clinics) following childbirth or use of paramedical services (domiciliary nursing services, Maternal & Child Health Nurses, physiotherapists) by the mothers and babies in this sample. The data supplied refer to services provided between March and December 1993. There may be a seasonal component to the frequency of attendance for problems with the mother and the baby, however, the winter season would mostly coincide with baby 'immune protection'. The information was supplied as aggregated data which limits interpretation to some extent as only averages can be calculated. It was not possible to track individuals or mother-baby dyads and there was no information on the nature of services provided. However, the use of routinely collected data, such as reported here, gives important information and raises
questions that would support the need for more costly and time-consuming methodologies such as studying a cohort of mothers and babies over time.

2.4.2 General practice visits

The general practitioner is a frequently utilised health professional in the six months after birth, especially in the early weeks. The mean number of visits to a GP made by mothers and babies was 7.7 in the six months following childbirth. This equates to 3.5 visits for a woman and 4.2 visits for a baby to a general practitioner in the six months following birth, which is higher than the 2.64 general practice visits per six months expected for all Australians in 1994 (Australian Institute of Health and Welfare 1995a). This level of utilisation, not previously documented, suggests a significant level of postnatal morbidity. Medicare services are utilised most by children less than 4 years, women in the childbearing years and the elderly (Australian Institute of Health and Welfare 1995a). It appears likely that recent mothers and babies less than six months account for much of this documented difference.

It is essential to remember that general practice visits are occurring at the same time as Domiciliary Nursing visits and regular visits to the Maternal and Child Health Nurse. The mean number of visits made to a Maternal and Child Health Nurse in the first year of life was 17.8± 8.7 in a recent Victorian study (Keys-Brown 1993). There are no data on how many women receive domiciliary nursing visits or how many visits are provided. The standard protocol offered by the Royal District Nursing Service (RDNS) is 4 visits, mainly in the 14 days following birth (personal communication RDNS headquarters). Recent mothers and their babies are utilising health services at a previously unrecognised level and the reasons for such high utilisation need to be sought.
2.4.3 Length of consultation
Babies appear more likely to have shorter consultations than their mothers. Does this represent the nature of neonatal problems or the tendency of GPs to charge a shorter Item number? Perhaps longer consultations, for say a feeding problem, are charged as a long consultation to the mother. It would seem artificial to separate mother and baby visits in the postnatal period as they frequently have shared problems. The aggregated nature of the data prevented the matching of mothers and their babies and it was impossible to determine the extent to which combined consultations occurred. This needs to be addressed in future studies.

2.4.4 The six week postnatal check-up
Services provided by GPs (fig 1) peak at seven weeks following birth. This most likely represents the traditional “six-week” postnatal check-up, an institution that has received little scrutiny. Most papers written about the maternal postnatal check-up are opinion based (Giles 1982; Murtagh 1994; Smibert 1989; Stover & Marnejon 1995), which would support the need for further research in this area. It is recommended in the U.K and Australia that infants have a six week check (Hall 1991). These recommendations are based on theoretical and practical arguments and not on any formal evaluation of health outcomes.

Many GP services are provided prior to these routine check-ups. Reasons for these visits should be examined as it suggests a concerning level of morbidity in these early weeks. The Australian Morbidity and Treatment Survey report that 30-40 per 100 GP encounters in the first year of life will be classified as ‘general and unspecified’ using the International Classification of Primary Care (ICPC) (Bridges-Webb et al. 1992). This suggests that the current ICPC system is inappropriate for coding infant morbidities and should be revised to better
describe the problems presenting to GPs in the first year of life. Perhaps the new coding tool ‘ICPC Plus’ (Britt 1997) will be better able to deal with infant morbidities.

It should be noted that these data were collected prior to the implementation of the ‘Healthy Futures’ program in 1994. It would be interesting to see whether use of general practice services has been affected by this change. Home visits and emergency after-hours visits account for a very small proportion (1.5%) of general practice consultations. Whether this represents a lack of demand or supply warrants further investigation.

2.5 Conclusions
The data show a high use of general practitioner services, which may correspond to the level of maternal and infant morbidity. The reasons for such high service use requires investigation. No doubt service use will be influenced by the types of problems encountered, the availability of services and the cultural norms and expectations of the community. Apart from the routine postnatal check-up the GP will encounter many other opportunities to deal with the common postnatal problems. The following chapters look in detail at what GPs believe should happen during these encounters (Chapter 3) and is compared to what actually takes place (Chapter 5).

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*The Healthy Futures program is a State government initiative to provide funding for ‘key visits’ to the Maternal and Child Health Nurse in the pre-school years. Local government is required to provide the additional funding for other visits. This has resulted in funding reduction and structural changes (fewer hours, less Nurses) in some local government areas. There are few data available to determine the impact these changes have made on use of maternal and child health services.*
CHAPTER THREE

GENERAL PRACTITIONERS AND THE ROUTINE POSTNATAL CHECK-UP

CONTENTS

3.1 Background
   3.1.1 Aims
   3.1.2 Choice of method

3.2 Method
   3.2.1 Sample size calculations
   3.2.2 Survey design
   3.2.3 Sample selection
   3.2.4 Survey procedure
   3.2.5 Data management
   3.2.6 Quantitative analysis
   3.2.7 Analysis of open-ended comments

3.3 Results
   3.3.1 Characteristics of the sample
   3.3.2 Response rate
   3.3.3 Involvement of GPs in postnatal care
   3.3.4 What should happen at the six week check-up?
   3.3.5 Caring for mothers and babies - what should GPs offer?
   3.3.6 Dealing with common postnatal problems
   3.3.7 An early check-up

3.4 Discussion
   3.4.1 Sampling method
   3.4.2 Postnatal care is routine general practice
   3.4.3 What should happen at the postnatal check-up?
   3.4.4 GP characteristics influencing their approach to postnatal care
   3.4.5 Confidence to deal with postnatal problems

3.5 Conclusion

There are very few published papers about the routine postnatal check-up. Of these, most are opinion-based papers; where an experienced GP or obstetrician writes about what they believe should be the focus of postnatal care and what should take place at the postnatal check (Giles 1982; Merriman 1996; Smibert 1989; Zander 1990).

3.1.1 Aims

The analysis of Medicare data, presented in Chapter 2, shows a rise in the number of visits around the time of the six week check-up suggesting that
many women see their GP for their routine postnatal check-up. The approach of general practitioners to postnatal care is outlined in this chapter. Particular emphasis is given to the routine postnatal check-up and the common postnatal problems, discussed in detail in Chapter 1.

In order to obtain views representative of Victorian GPs and be able to analyse the effect of gender, qualifications, practice location, obstetric practice and age on attitudes towards postnatal care 700 GPs were required to enable small, yet practically meaningful, differences between the sub-groups to be detected (see page 46).

3.1.2 Choice of study design

Collecting information from a large number of GPs requires a practical method in terms of cost and time. The self-administered postal survey is cheaper than telephone or face-to-face interviews (Armstrong et al. 1994) yet it requires high response rates to be achieved if non-response bias is to be minimised (Sibbald et al. 1994).

Response rates to postal surveys are influenced by the number of follow-up contacts (Dillman 1978), saliency of the topic, administering institution, length of survey and target audience (Heberlein & Baumgartener 1978) as well as time-period taken for the study (Parsons et al. 1994) and the use of inducements (Dechan et al. 1997; Goyder 1982; Heberlein & Baumgartener 1978). Postal surveys are easily repeatable, avoid interviewer bias, can be distributed over wide geographical areas with little increase in cost (Cartwright 1988) and result in less ‘socially desirable’ answers (Armstrong et al. 1994) than face-to-face or telephone interviews.

The postal survey is particularly useful when reasonably simple data are required, addresses are known and the budget is low (Armstrong et al. 1994). When the factors affecting response rates are taken into account by researchers, surveys of Australian general practitioners have obtained response rates of 58%
for a National survey of GPs about intellectual disability (Lennox et al. in press), 72% for a Statewide survey about adolescent health (Veit et al. 1996) and 85% for a Statewide survey about sexually transmitted diseases (Mulvey & Temple-Smith 1997). Conversely, if factors affecting response rates are ignored, as in a recent Australian study where the survey was distributed with a medical newspaper (Bailie et al. 1997), response rates as low as 14% can be expected.

A recent UK study, with a response rate of 44%, found that non-responders to the postal survey, about alcohol-misusing patients, differed significantly from responders (Templeton et al. 1997). Factors affecting response rates were taken into account in preparation for the survey reported in this Chapter.

3.2 Method

3.2.1 Sample size calculations

Firstly, the sample needed to be large enough to enable the effect of gender, age, practice location, obstetric practice and qualifications on a GP’s approach to postnatal care to be studied. Prior to this survey Mulvey and Temple-Smith had obtained an 85% response rate (Mulvey & Temple-Smith 1997). Considering this response rate the sample size for the survey reported here was calculated assuming a 70% response rate. The surveys by Veit et al (1996) and Lennox et al (in press) had not yet been undertaken.

Secondly, the magnitude of the difference to be detected had to be decided upon. In asking GPs what they thought should take place at the routine six week check it was decided that differences of greater than 10% between say, male and female GPs or rural and metropolitan GPs, were of practical significance. The choice of the greater than 10% difference was based on discussions with other researchers and GPs about what constituted a clinically important difference; along with the well known practical issue that for a small decrease in the percentage difference to be detected there would be a relatively large increase in the sample size required to detect that difference. This would
result in increased cost, time and personnel required to undertake the survey and yield little clinically important information.

Thirdly, the effect of gender on the approach to postnatal care needed to be considered. As fewer than a quarter of Victorian GPs are female a simple random sample of GPs would not allow meaningful comparisons to be made between male and female GPs, as there would not be enough female GPs in the sample. For this reason equal numbers of female and male GPs were needed.

Taking account of these issues, the sample size was calculated using the conventional levels of statistical significance (power = 80%, p=0.05). To be able to detect an 11% difference in the number of GPs recommending for example, the discussion of emotional well-being (eg:71% female GPs vs 60% male GPs), 310 GPs were required in each group. It was decided to survey about 1100 GPs to be sure of getting 1000 eligible GPs in the sample. Assuming a 70% response rate (at least) from the eligible GPs this would provide at least 700 GPs and would allow differences of greater than 10% to be detected.

3.2.2 Survey design

The survey used in this study was developed over the first six months of doctoral candidature using the following process.

Phase 1

- discussions with researchers experienced in survey design
- review of texts and articles on survey theory and design (Armstrong et al. 1994; Bennett 1975; DeVaus, 1985; Fitzpatrick 1991; McAleer 1994; Strasser & Davis 1991; Warwick, 1975)
- review of surveys used in general practice research in Australia.
Phase 2: Production of a working draft

The initial draft was based upon the postnatal themes shown in Table 3.1; which emerged from interviews with GPs undertaken by myself and Dr Jacinta Halloran during the shared care study (Halloran et al. 1992). The survey items were developed to reflect these themes and were also influenced by the available literature and discussions with the reference group members. In order to meet the main aims of the study the survey had to provide information on: the level of involvement of GPs in postnatal care, what GPs considered should be routine examination and discussion at the six week check-up, their knowledge and confidence to deal with common postnatal physical problems, depression and breastfeeding issues as well as how the GP fitted in with other health professionals in this area. Figure 3.1 shows the sequence undertaken to develop the survey.

<table>
<thead>
<tr>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>-detecting medical complications</td>
</tr>
<tr>
<td>-encouraging breastfeeding</td>
</tr>
<tr>
<td>-providing ongoing care</td>
</tr>
<tr>
<td>-check on coping</td>
</tr>
<tr>
<td>-check for postnatal depression</td>
</tr>
<tr>
<td>-check on relationship</td>
</tr>
<tr>
<td>-check on sexuality</td>
</tr>
</tbody>
</table>

(Table adapted from Halloran, Gunn & Young, 1992)
The final survey consisted of nine sections; a copy is in Appendix 1, 3.2. The sections were designed to provide data on:

- involvement in obstetric and postnatal care; GPs were asked to estimate their involvement and to select a category which best suited them.
- the examination and discussion which should take place at the postnatal check-up. Nine items for maternal examination, thirty items for discussion and fourteen items for infant examination were listed and GPs had to select whether they believed a particular examination or discussion item should
take place at the routine postnatal check-up nearly always/sometimes/rarely. There was space for them to write comments.

- the role of the GP in postnatal care. Statements about the role, rated on 5 point Likert scales (agree strongly/agree/not certain/disagree/disagree strongly), were presented eg: women do not need to see a GP following childbirth unless they have specific problems. GPs were also asked to list in point form what they saw as the major roles and responsibilities for a general practitioner when providing postnatal care.

- the confidence of GPs to deal with common postnatal problems such as perineal pain, tiredness and exhaustion, backache, mastitis, sexual issues, contraception, relationship problems and parenting issues.

- demographic and qualification details.

### 3.2.3 Sample selection

Representative samples are required if the results are to be generalised to the wider general practice population (Mainous & Hougland 1991). However, obtaining a representative sample of Australian GPs is fraught with difficulty as there is no national database of practising GPs; available lists tend to under or overestimate the number of GPs (Saltman & Mant 1992).

Lists of Vocationally registered GPs are available from the Health Insurance Commission using a ‘modified synchronised sampling system’ to avoid the repeated selection of the same doctors (Calcino & Dickinson 1994). As 25% of GPs were not vocationally registered at the time of the study and the effect of using the ‘modified synchronised sampling system’ technique was not known, Divisional Lists¹ were used to select the sample. Dickinson and Sanson-Fisher have urged researchers to consider the use of locally maintained data bases for research in general practice (Dickinson & Sanson-Fisher 1992).

¹In Australia, Divisions of General Practice funded via the Federal Government enable GPs to group together on a geographical basis to undertake continuing medical education and develop projects which address the needs of their communities.
All 32 divisions in Victoria at the time of the study were approached to identify those with a comprehensive database of all the GPs in their area. This meant they had listed, not only members, but also non-members practising in their area. This method of sampling meant that locums would not have been included and that trainee GPs on short placements (3 - 6 months) were likely to be under represented. As these two groups are unlikely to be involved in the ongoing care of mothers and babies this method was preferred to the known pitfalls of including practitioners who are not GPs, encountered so often when using the alternative sampling frames of Medicare provider numbers or Medical Board registration lists.

At the time of the survey 22 divisions had developed comprehensive lists of GPs via feedback from regular mailings, personal networks and phonecalls to practices in their local areas. One division refused to participate in the survey. One division was not included as they were conducting their own project on obstetric care which might have influenced their response, and one division failed to supply the list despite agreeing to be involved. The remaining 19 divisions (consisting of 2464 GPs, which represents approximately 50% of the Victorian GP workforce (Australian Institute of Health and Welfare 1995b) were included in the survey; 10 rural and 9 metropolitan, spread throughout Victoria.

Disproportionate stratified sampling (Mainous & Hougland 1991) to oversample female GPs was used to provide enough female GPs to detect differences between male and female GPs of greater than 10% (power = 80%, p=0.05). The survey sample consisted of all listed female GPs (n=503) and a random sample of male GPs (n=601) from each Division. Equal proportions of male GPs were surveyed from each Division. In Victoria 24% of GPs are female (personal communication; Barbara Toohey, Health Insurance Commission, Professional Review Division).
3.2.4 Survey procedure

To maximise response rates to the survey a number of strategies were used:

- small advertisement in Divisional Newsletters to inform GPs of the forthcoming survey
- a carefully constructed introductory letter (Appendix I, 3.1)
- reply paid return envelopes
- a visually appealing survey layout (Appendix I, 3.2)
- opportunity to gain practice assessment points (Appendix I, 3.4)
- reminder postcard at two weeks (Appendix I, 3.3)
- repeat mailing of survey at 4 weeks
- phone follow-up at 6 weeks
- opportunity to receive written feedback (Appendix I, 3.4)

The postal survey (Appendix I, 3.2), covering letter (Appendix I, 3.1) and reply paid envelope were sent to 1104 GPs.

3.2.5 Data management

As surveys were returned they were marked as returned complete or incomplete on the Excel spreadsheet used as the data base for the survey. This facilitated follow-up of only those who had not returned their survey. Three months after the survey had been posted data entry was undertaken by Datatime, a data entry company. Each survey was entered twice to minimise data entry errors. The data was received as a flat ASCI file and imported onto STATA for windows (Stata Corporation College Station, USA 1995) to undertake the data analysis.

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2To maintain Vocational Registration (VR) GPs must take part in a quality assurance and continuing medical education program which works on a points system over a three year period. As an incentive to participation GPs were eligible to receive 3 Practice Assessment points (20 were required over a triennium) for returning a completed survey.
3.2.6 Quantitative analysis

Univariate and multivariate analyses (using Chi-Square comparisons and odds ratios) of the data were undertaken using STATA for Windows, (Stata Corporation College Station, USA 1995).

Firstly, univariate analysis was undertaken. Simple frequency counts were performed for each variable. Cross-tabulations were used to determine the association of certain key GP characteristics (gender, age, practice location, obstetric qualifications, obstetric practice and being a parent) with beliefs, knowledge and attitudes towards postnatal care. These key characteristics were chosen prior to analysis as variables which may be likely to influence a GP’s response to the survey items. The $X^2$ test was used to compare differences between proportions and determine statistical significance (Daly et al. 1991). Due to the multiple comparisons undertaken only differences with a p<0.01 are reported.

To explore further the influence of the key characteristics studied in the univariate analysis, logistic regression analysis was performed using each variable of interest whilst controlling for age, gender, location of practice, whether the GP was involved in intrapartum or shared care obstetric practice and obstetric qualifications (DRACOG or equivalent).

3.2.7 Analysis of open-ended comments

General practitioners were asked to write brief comments on what they saw as their major roles and responsibilities when providing postnatal care (Appendix 1, 3.2. Question 20). Every survey was coded as to whether a GP had made a comment or not and this was entered along with the other variables as discussed in the above section. Following this every comment was read and re-read and a list was compiled of all the points mentioned. Then the points mentioned were sorted into groups and the groups into themes. After a one month interval this step was repeated. Finally, all the comments were recoded according to the theme list. One hundred surveys were coded twice to avoid
classification errors. Data were then entered onto an Excel spreadsheet and analysed using STATA for frequency counts.

3.3 Results

3.3.1 Characteristics of the sample
Table 3.2 shows the characteristics of the surveyed GPs. By oversampling female GPs we have a younger group who practise less intrapartum obstetrics (but more shared and postnatal care) than the average Victorian GP but are similar in terms of practice location, qualifications, vocational registration and divisional membership.

Table 3.2 Demographic characteristics of surveyed GPs

<table>
<thead>
<tr>
<th></th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>341 (47.7)</td>
<td>374 (52.3)</td>
<td>715</td>
</tr>
<tr>
<td>Age (25-40)</td>
<td>119 (35)</td>
<td>237 (63)</td>
<td>356 (50)</td>
</tr>
<tr>
<td>Age (41-60)</td>
<td>172 (51)</td>
<td>119 (32)</td>
<td>291 (41)</td>
</tr>
<tr>
<td>Age (61+)</td>
<td>47 (14)</td>
<td>18 (5)</td>
<td>65 (9)</td>
</tr>
<tr>
<td>Melbourne Metro</td>
<td>204 (60)</td>
<td>239 (64)</td>
<td>443 (62)</td>
</tr>
<tr>
<td>Provincial city</td>
<td>56 (16)</td>
<td>69 (18)</td>
<td>125 (18)</td>
</tr>
<tr>
<td>Rural towns</td>
<td>80 (24)</td>
<td>66 (18)</td>
<td>146 (20)</td>
</tr>
<tr>
<td>DRACOG holder</td>
<td>118 (35)</td>
<td>135 (36)</td>
<td>253 (36)</td>
</tr>
<tr>
<td>FRACGP holder</td>
<td>82 (24)</td>
<td>79 (21)</td>
<td>161 (23)</td>
</tr>
<tr>
<td>Divisional member</td>
<td>236 (70)</td>
<td>276 (74)</td>
<td>512 (72)</td>
</tr>
<tr>
<td>VR</td>
<td>302 (90)</td>
<td>339 (92)</td>
<td>641 (91)</td>
</tr>
</tbody>
</table>

3.3.2 Response rate
Out of the original sample of 1104 GPs, 37 had left the address, 8 had received two surveys, 13 had recently retired, 17 were not in general practice (in termination clinics, sports medicine, psychotherapy) and 7 had left the State; leaving an eligible sample of 1022. Seventy-six percent (776/1022) of surveys were returned; 15 were incomplete as the doctor was not involved in any postnatal care and 46 were returned blank leaving 715/1022 (70%) usable surveys.
3.3.3 Involvement of GPs in postnatal care

For the purposes of this study postnatal care is defined as seeing women for the traditional six week postnatal check-up. Six hundred and fifty six (92%) of the GPs surveyed were involved in postnatal care. Accounting for the oversampling of female GPs in this survey results in the finding that around 90% of Victorian GPs would be involved in postnatal care. Female GPs were more likely than male GPs (96% vs 87%) to be involved in postnatal care ($X^2=19$, df=1, $p=0.001$) as were GPs who held the Diploma of Obstetrics ($X^2=27$, df=1, $p=0.001$). Of the GPs involved in postnatal care 38% (250/656) held their Diploma of Obstetrics, 91% (597/656) were vocationally registered and 23% (148/656) were Fellows of the RACGP. Ninety-nine percent (250/253) of GPs who held a Diploma of Obstetrics were involved in postnatal care. Metropolitan GPs were as likely as Rural GPs to be involved in postnatal care.

The number of women seen for a ‘six week postnatal check’ in the previous year is shown in Table 3.3. Ninety-four percent (670/712) of GPs stated that they sometimes saw a woman and/or her baby prior to the six week check, 6% (42) said this occurred nearly always, 13% (90) said very often, 31% (223) said often and 44% (315) said occasionally. Only 6% (42) of GPs said they almost never saw a woman and/or her baby in the first six weeks following birth.

Table 3.3 Number of women seen for a ‘six week postnatal check’ in the previous year

<table>
<thead>
<tr>
<th>No./year</th>
<th>No. of GPs (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>171 (26%)</td>
</tr>
<tr>
<td>5-10</td>
<td>195 (30%)</td>
</tr>
<tr>
<td>11-20</td>
<td>142 (22%)</td>
</tr>
<tr>
<td>&gt;20</td>
<td>148 (23%)</td>
</tr>
<tr>
<td>656</td>
<td></td>
</tr>
</tbody>
</table>

NB: % may not add to 100 as figures have been rounded

57
3.3.4 What should happen at the six week check-up?

Most GPs felt clear about what should occur at the six week check-up. Ninety-one percent (647) agreed/agreed strongly with the statement: "I am clear about what should take place at the six week check / routine postnatal review".

Three hundred and forty-six (48.5%) GPs agreed/agreed strongly with the statement "a vaginal examination at the six week check / routine postnatal review will often reveal a problem that needs to be addressed" and 648 (90.8%) agreed/agreed strongly with the statement "the opportunity for discussion and a thorough physical examination are of equal importance at the six week check / routine postnatal review".
Table 3.4 shows what examination and discussion GPs believe should usually occur at the six week postnatal check-up.

Table 3.4: What should occur at the six week postnatal check-up: a general practice perspective

<table>
<thead>
<tr>
<th>Examination</th>
<th>Nearly Always</th>
<th>Sometimes</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdomen</td>
<td>645 90.6</td>
<td>44 6.2</td>
<td>23 3.2</td>
</tr>
<tr>
<td>BP</td>
<td>629 88.2</td>
<td>75 10.5</td>
<td>9.0 1.3</td>
</tr>
<tr>
<td>Perineum</td>
<td>601 84.2</td>
<td>85 11.9</td>
<td>28 3.9</td>
</tr>
<tr>
<td>Vaginal Ex.</td>
<td>552 77.5</td>
<td>99 13.9</td>
<td>61 8.6</td>
</tr>
<tr>
<td>Pelvic floor</td>
<td>462 65.5</td>
<td>126 17.9</td>
<td>117 16.6</td>
</tr>
<tr>
<td>Breast</td>
<td>463 64.9</td>
<td>176 24.7</td>
<td>74 10.4</td>
</tr>
<tr>
<td>Weight</td>
<td>374 52.5</td>
<td>159 22.3</td>
<td>179 25.1</td>
</tr>
<tr>
<td>Urine</td>
<td>314 44.3</td>
<td>236 33.3</td>
<td>159 22.4</td>
</tr>
<tr>
<td>Pap smear</td>
<td>262 37.0</td>
<td>325 45.9</td>
<td>121 17.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discussion</th>
<th>Nearly Always</th>
<th>Sometimes</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant feeding</td>
<td>703 98.7</td>
<td>8 1.1</td>
<td>1 0.1</td>
</tr>
<tr>
<td>Contraception</td>
<td>697 97.9</td>
<td>13 1.8</td>
<td>2 0.3</td>
</tr>
<tr>
<td>Mother’s feelings</td>
<td>620 87.6</td>
<td>69 9.7</td>
<td>19 2.7</td>
</tr>
<tr>
<td>Infant sleeping</td>
<td>623 87.5</td>
<td>74 10.4</td>
<td>15 2.1</td>
</tr>
<tr>
<td>PV bleeding</td>
<td>613 86.6</td>
<td>87 12.3</td>
<td>8 1.1</td>
</tr>
<tr>
<td>Immunisation</td>
<td>591 83.0</td>
<td>88 12.4</td>
<td>33 4.6</td>
</tr>
<tr>
<td>Infant behaviour</td>
<td>565 80.0</td>
<td>106 15.0</td>
<td>35 5.0</td>
</tr>
<tr>
<td>Infant crying</td>
<td>552 78.0</td>
<td>126 17.8</td>
<td>30 4.2</td>
</tr>
<tr>
<td>Labour &amp; birth</td>
<td>544 77.4</td>
<td>124 17.6</td>
<td>35 5.0</td>
</tr>
<tr>
<td>Mother’s sleep</td>
<td>549 77.1</td>
<td>127 17.8</td>
<td>36 5.1</td>
</tr>
<tr>
<td>Pelvic floor exercises</td>
<td>537 75.8</td>
<td>135 19.1</td>
<td>36 5.1</td>
</tr>
<tr>
<td>Tiredness</td>
<td>474 67.3</td>
<td>185 26.3</td>
<td>45 6.4</td>
</tr>
<tr>
<td>Mother’s diet</td>
<td>463 65.3</td>
<td>191 26.9</td>
<td>55 7.8</td>
</tr>
<tr>
<td>Mother’s exercise</td>
<td>416 58.7</td>
<td>221 31.2</td>
<td>72 10.2</td>
</tr>
<tr>
<td>Coping with other</td>
<td>414 58.6</td>
<td>234 33.1</td>
<td>59 8.3</td>
</tr>
<tr>
<td>children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting</td>
<td>362 52.2</td>
<td>247 35.6</td>
<td>84 12.1</td>
</tr>
<tr>
<td>Sexual issues</td>
<td>348 49.2</td>
<td>284 40.2</td>
<td>75 10.6</td>
</tr>
<tr>
<td>Relationship with</td>
<td>345 48.9</td>
<td>273 38.7</td>
<td>88 12.5</td>
</tr>
<tr>
<td>partner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care in hosp</td>
<td>335 48.5</td>
<td>248 35.9</td>
<td>108 15.6</td>
</tr>
<tr>
<td>Urine problems</td>
<td>307 43.7</td>
<td>285 40.5</td>
<td>111 15.8</td>
</tr>
<tr>
<td>Bowel symptoms</td>
<td>274 38.9</td>
<td>309 43.8</td>
<td>122 17.3</td>
</tr>
<tr>
<td>Timeout from baby</td>
<td>269 38.4</td>
<td>306 43.7</td>
<td>126 18.0</td>
</tr>
<tr>
<td>Household work</td>
<td>258 36.9</td>
<td>284 40.6</td>
<td>158 22.6</td>
</tr>
<tr>
<td>Back problems</td>
<td>204 28.9</td>
<td>364 51.6</td>
<td>138 19.5</td>
</tr>
<tr>
<td>Return to work</td>
<td>199 28.2</td>
<td>343 48.6</td>
<td>164 23.2</td>
</tr>
<tr>
<td>Next pregnancy</td>
<td>179 25.4</td>
<td>271 38.5</td>
<td>254 36.1</td>
</tr>
<tr>
<td>Headache</td>
<td>99 14.1</td>
<td>304 43.4</td>
<td>297 42.4</td>
</tr>
<tr>
<td>Relaxation techniques</td>
<td>94 13.5</td>
<td>302 43.3</td>
<td>301 43.2</td>
</tr>
<tr>
<td>Financial concerns</td>
<td>40 5.7</td>
<td>260 37.0</td>
<td>402 57.3</td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values
Table 3.5: Routine examination and discussion at the six week postnatal check-up: significant differences according to gender of doctor

<table>
<thead>
<tr>
<th>Examination</th>
<th>Number Male (n=341)</th>
<th>%</th>
<th>Number Female (n=374)</th>
<th>%</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal Ex.</td>
<td>241</td>
<td>70.9</td>
<td>311</td>
<td>83.6</td>
<td>16.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pelvic floor</td>
<td>194</td>
<td>57.6</td>
<td>268</td>
<td>72.8</td>
<td>18.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Breast</td>
<td>188</td>
<td>55.1</td>
<td>275</td>
<td>73.4</td>
<td>27.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Weight</td>
<td>204</td>
<td>59.8</td>
<td>170</td>
<td>45.8</td>
<td>13.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Urine</td>
<td>183</td>
<td>54.3</td>
<td>131</td>
<td>35.2</td>
<td>26.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Perineum</td>
<td>265</td>
<td>77.7</td>
<td>336</td>
<td>90.1</td>
<td>20.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contraception</td>
<td>327</td>
<td>96.5</td>
<td>370</td>
<td>99.2</td>
<td>6.4</td>
<td>0.01</td>
</tr>
<tr>
<td>Mother’s feelings</td>
<td>269</td>
<td>80.1</td>
<td>351</td>
<td>94.4</td>
<td>33.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Infant sleeping</td>
<td>278</td>
<td>82.0</td>
<td>345</td>
<td>92.5</td>
<td>17.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Infant behaviour</td>
<td>244</td>
<td>73.1</td>
<td>321</td>
<td>86.3</td>
<td>19.3</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Infant crying</td>
<td>246</td>
<td>73.0</td>
<td>306</td>
<td>82.5</td>
<td>9.2</td>
<td>0.002</td>
</tr>
<tr>
<td>Labour &amp; birth</td>
<td>242</td>
<td>71.8</td>
<td>302</td>
<td>82.5</td>
<td>11.5</td>
<td>0.001</td>
</tr>
<tr>
<td>Mother’s sleep</td>
<td>239</td>
<td>70.5</td>
<td>310</td>
<td>83.1</td>
<td>16.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pelvic floor exercises</td>
<td>221</td>
<td>65.9</td>
<td>316</td>
<td>84.7</td>
<td>33.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Tiredness</td>
<td>191</td>
<td>57.0</td>
<td>283</td>
<td>76.7</td>
<td>30.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mother’s diet</td>
<td>194</td>
<td>57.6</td>
<td>269</td>
<td>72.3</td>
<td>17.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Coping with other children</td>
<td>174</td>
<td>51.8</td>
<td>240</td>
<td>64.7</td>
<td>12.1</td>
<td>0.001</td>
</tr>
<tr>
<td>Relationship with partner</td>
<td>138</td>
<td>41.2</td>
<td>207</td>
<td>55.8</td>
<td>15.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Timeout from baby</td>
<td>110</td>
<td>33.0</td>
<td>159</td>
<td>43.2</td>
<td>7.7</td>
<td>0.006</td>
</tr>
<tr>
<td>Household work</td>
<td>95</td>
<td>28.6</td>
<td>163</td>
<td>44.3</td>
<td>18.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Next pregnancy</td>
<td>101</td>
<td>30.1</td>
<td>78</td>
<td>21.2</td>
<td>7.3</td>
<td>0.007</td>
</tr>
</tbody>
</table>

*analysis performed using all respondents who selected nearly always (routinely) versus those choosing sometimes and rarely (not routinely), df=1.
*remained significant when adjusted for age, practice location, obstetric practice and qualifications

General practitioners’ beliefs about what should occur routinely at the check-up differed significantly according to gender (see Table 3.5), age (see Table 3.6) and practice location of doctor (see Table 3.7). There were also differences associated with postgraduate obstetric qualifications and involvement with intrapartum obstetrics.
GPs who held the Diploma of the Royal Australian College of Obstetrics and Gynaecology (DRACOG) or equivalent were less likely to believe that a urine sample should be taken (33.2% vs 50.2%, $X^2=19.1$, $p<0.001$), the weight recorded (45.1% vs 56.5%, $X^2=8.5$, $p=0.004$) and relaxation discussed (8.9% vs 16.1%, $X^2=7.0$, $p<0.01$). None of these items remained significant when adjusted for age, gender, practice location and obstetric practice.

GPs who were involved in intrapartum obstetrics (GP obstetricians) were more likely than other GPs to believe that a routine pap smear should be taken (49.2% vs 34.1%, $X^2=10.2$, $p=0.001$) and less likely to believe that the blood pressure should be taken (77.2% vs 90.5%, $X^2=17.8$, $p<0.001$), a breast examination performed (47.2% vs 68.7%, $X^2=20.9$, $p<0.001$) or a urine sample tested (26.2% vs 47.9%, $X^2=19.8$, $p<0.001$). GP obstetricians were less likely to believe that immunisation (74.6% vs 84.7%, $X^2=7.4$, $p=0.006$), labour and delivery (61.6% vs 81.0%, $X^2=22.2$, $p<0.001$), maternal diet (49.6% vs 68.6%, $X^2=16.4$, $p<0.001$), timeout from baby (26.6% vs 40.9%, $X^2=8.8$, $p=0.003$), domestic chores (24.2% vs 39.5%, $X^2=10.3$, $p<0.001$), return to work (18.4% vs 30.2%, $X^2=7.1$, $p=0.008$), headache (4.8% vs 16.1%, $X^2=10.9$, $p=0.001$) and relaxation techniques (5.7% vs 15.1%, $X^2=7.7$, $p=0.006$) should be discussed at the six week check-up. When adjusted for age, gender, practice location and qualifications all of these items remained significant ($p<0.05$); apart from breast examination, immunisation and return to work.
Table 3.6: Routine examination and discussion at the six week postnatal check-up: significant differences according to age of doctor

<table>
<thead>
<tr>
<th>Examination</th>
<th>20 - 40 years (n=356)</th>
<th>41 - 60 years (n=291)</th>
<th>&gt;60 years (n=65)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelvic floor</td>
<td>220 62.5</td>
<td>186 65</td>
<td>54 84.4</td>
<td>11.5</td>
<td>0.003</td>
</tr>
<tr>
<td>Weight</td>
<td>158 44.4</td>
<td>168 58.1</td>
<td>45 70.3</td>
<td>21.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Urine</td>
<td>123 34.6</td>
<td>143 49.8</td>
<td>45 71.4</td>
<td>36.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pap smear</td>
<td>107 30.1</td>
<td>125 43.6</td>
<td>28 44.4</td>
<td>13.9</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Discussion

| Contraception   | 352 98.9              | 283 98.3              | 59 90.8          | 17.8 | <0.001 |
| Mother’s feelings | 333 93.5             | 242 84.3              | 43 69.4          | 33.5 | <0.001 |
| Infant sleeping | 329 92.4              | 239 82.9              | 52 80.0          | 16.5 | <0.001 |
| Mother’s sleep  | 295 82.8              | 206 71.5              | 45 60.2          | 14.0 | 0.001  |
| Back problems   | 86 24.2               | 90 31.7               | 25 39.7          | 8.6  | 0.014  |
| Next pregnancy  | 70 19.8               | 84 29.7               | 23 35.9          | 12.4 | 0.002  |
| Relaxation      | 36 10.2               | 42 14.9               | 15 24.6          | 10.2 | 0.006  |

NB: analysis performed using all respondents who selected nearly always (routinely) versus those choosing sometimes and rarely (not routinely), df=2.

Table 3.7: Routine examination and discussion at the six week postnatal check-up: significant differences according to practice location of doctor

<table>
<thead>
<tr>
<th>Examination</th>
<th>Metropolitan n=568</th>
<th>Rural n=146</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdomen</td>
<td>416 94.3</td>
<td>228 84.4</td>
<td>19.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Vaginal Ex.</td>
<td>359 81.6</td>
<td>192 70.9</td>
<td>11.1</td>
<td>0.001*</td>
</tr>
<tr>
<td>Breast</td>
<td>313 70.9</td>
<td>149 54.9</td>
<td>18.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Weight</td>
<td>248 56.4</td>
<td>125 46.1</td>
<td>7.1</td>
<td>0.008*</td>
</tr>
<tr>
<td>Urine</td>
<td>211 48.2</td>
<td>102 37.8</td>
<td>7.3</td>
<td>0.007</td>
</tr>
<tr>
<td>Pap smear</td>
<td>146 33.3</td>
<td>116 43.1</td>
<td>6.9</td>
<td>0.009*</td>
</tr>
</tbody>
</table>

Discussion

| Infant behaviour | 339 77.1          | 225 84.9    | 6.4  | 0.01*  |
| Mother’s diet    | 303 68.9          | 159 59.3    | 6.7  | 0.01   |
| Back problems    | 141 32.2          | 62 23.2     | 6.5  | 0.01   |

NB: analysis performed using all respondents who selected nearly always (routinely) versus those choosing sometimes and rarely (not routinely), df=1. Denominators may vary due to missing values. *remained significant when adjusted for gender, age, obstetric practice and qualifications. *Rural GPs were those practising in towns with population less than 15,000. Analysis of Metropolitan vs Provincial City vs small Rural Town made no difference to the findings, hence the simple Metropolitan vs Rural analysis is presented.
Most GPs surveyed were parents (n=616, 86.5%). GPs who had their own children were more likely to believe that the pelvic floor should be examined (67.3% vs 54.3%, $X^2 = 6.1$, $p=0.01$). Apart from this there were no other significant differences found between GPs who were parents and those who were not.

**Logistic regression analysis**

Each discussion and examination variable was analysed, using the logistic regression command on STATA for Windows, to adjust for the key characteristics of interest:

- gender (using male as the base)
- age (20-40y, 41-60y, >60y; using 20-40y as the base)
- practice location (Metropolitan, provincial city > 15,000, rural; using metropolitan as the base)
- obstetric practice (provider of intrapartum care used as base)
- shared care practice (provider of shared care used as base)
- qualifications (possess DRACOG used as base)
After adjusting for the other key characteristics gender remained a highly significant influence on 19 variables (table 3.8), obstetric practice on 9 variables (see text) and qualifications on none (see text).

Table 3.8: Significant differences between female and male GPs as to what should occur at the six week postnatal check-up adjusted for key GP characteristics

<table>
<thead>
<tr>
<th>Variable **</th>
<th>Adjusted odds ratio* female vs male GPs</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal ex.</td>
<td>2.49</td>
<td>1.68 - 3.71</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pelvic floor</td>
<td>2.66</td>
<td>1.87 - 3.78</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Breast</td>
<td>2.46</td>
<td>1.74 - 3.48</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Weight</td>
<td>0.71</td>
<td>0.51 - 0.98</td>
<td>0.035</td>
</tr>
<tr>
<td>Urine</td>
<td>0.47</td>
<td>0.34 - 0.66</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Perineum</td>
<td>3.40</td>
<td>2.14 - 5.41</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother’s feelings</td>
<td>3.15</td>
<td>1.83 - 5.42</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Infant sleeping</td>
<td>2.21</td>
<td>1.34 - 3.66</td>
<td>0.002</td>
</tr>
<tr>
<td>Infant behaviour</td>
<td>2.12</td>
<td>1.40 - 3.19</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Infant crying</td>
<td>1.73</td>
<td>1.17 - 2.54</td>
<td>0.006</td>
</tr>
<tr>
<td>Labour and birth</td>
<td>1.53</td>
<td>1.03 - 2.26</td>
<td>0.034</td>
</tr>
<tr>
<td>Mother’s sleep</td>
<td>1.80</td>
<td>1.22 - 2.64</td>
<td>0.003</td>
</tr>
<tr>
<td>Pelvic floor exercises</td>
<td>2.77</td>
<td>1.89 - 4.07</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mother’s tiredness</td>
<td>2.46</td>
<td>1.74 - 3.48</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mother’s diet</td>
<td>1.81</td>
<td>1.29 - 2.54</td>
<td>0.001</td>
</tr>
<tr>
<td>Coping with other children</td>
<td>1.63</td>
<td>1.18 - 2.26</td>
<td>0.003</td>
</tr>
<tr>
<td>Relationship with partner</td>
<td>1.72</td>
<td>1.25 - 2.37</td>
<td>0.001</td>
</tr>
<tr>
<td>Timeout from baby</td>
<td>1.47</td>
<td>1.05 - 2.05</td>
<td>0.024</td>
</tr>
<tr>
<td>Household work</td>
<td>2.05</td>
<td>1.46 - 2.88</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Adjusted for age, location of practice, provision of intrapartum care, provision of shared care and postgraduate qualifications in obstetrics (DRACOG or equivalent). **Sample sizes varied from 692 to 700 for logistic regression analysis.

Age accounts for some differences in the approach to the postnatal check-up. GPs in the over 60s age group were more likely to recommend weighing the mother, testing urine, checking the perineum, taking a pap smear, asking about...
headaches, backache, discussing the next pregnancy and pelvic floor exercises and less likely to discuss issues such as parenting and maternal feelings than GPs in the 20-40 age group. There were similar findings for GPs in the 41-60 age group who were more likely to recommend testing the urine, taking a pap smear, weighing the mother, checking the perineum, discussing the next pregnancy and less likely to recommend discussing maternal feelings than the GPs in the 20-40 age group.

Analysing the data to account for the number of visits did not alter the reported gender differences apart from weight (the upper confidence limit moved from 0.98 to 1.15, see Table 3.8)

3.3.5 Caring for mothers and babies: what should GPs offer?

Six hundred and nineteen (87.3%) GPs disagreed/disagreed strongly with the statement: “women do not need to see a GP following childbirth unless they have specific problems”.

GPs believed they had a role to play in breastfeeding: 96.8% (687) agreed/agreed strongly with the statement “GPs should be able to deal with common breastfeeding problems” and 80.3% (569) disagreed/disagreed strongly with the statement “breastfeeding problems should usually be managed by a lactation consultant”. Most GPs also believed they had a role in postnatal depression: 95.5% (679) disagreed/disagreed strongly with the statement “if postnatal depression occurs a visit to a GP is unlikely to make a great deal of difference” and 61% (432) disagreed/disagreed strongly with the statement: “postnatal depression should usually be managed by a psychiatrist expert in the area”.

To determine what GPs felt was central to postnatal care, an open ended question about the major roles and responsibilities of a GP in postnatal care was situated in the middle of the survey. GPs had already worked through what they considered to be important at the postnatal check-up from the list
supplied in the survey. It was anticipated that an open-ended question at this stage in the survey would benefit from the fact that GPs would have been thinking about the check in detail and would write comments on what they considered the most important issues. It could also serve as a check that a major area had not been omitted from the survey.

Four hundred and sixty-eight (65.5%) GPs wrote a detailed comment, 147 (20.6%) a brief comment and 99 (13.9%) left the section blank. Thematic analysis revealed four major roles that GPs felt were important when providing postnatal care: physical, emotional, social and professional. Table 3.9 shows the items that make up each of the roles and the number of GPs making the comment.
Table 3.9: Roles and responsibilities of general practitioners providing postnatal care - results of thematic analysis of open-ended comments

<table>
<thead>
<tr>
<th></th>
<th>Number of GPs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n = 603 (%)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Physical role</strong></td>
<td></td>
</tr>
<tr>
<td>Examination of mother (back to normal)</td>
<td>375 (62.2)</td>
</tr>
<tr>
<td>Examination of baby (no abnormalities)</td>
<td>348 (57.7)</td>
</tr>
<tr>
<td>Diagnose &amp; manage any physical illness or concern</td>
<td>189 (31.3)</td>
</tr>
<tr>
<td>Preventive health care (pap smear, contraception, BSE, pelvic floor ex)</td>
<td>182 (30.2)</td>
</tr>
<tr>
<td>Infant feeding</td>
<td>124 (20.6)</td>
</tr>
<tr>
<td>Breastfeeding (encourage, support, know about)</td>
<td>121 (20.1)</td>
</tr>
<tr>
<td>Infant development (normal milestones, weight, ?failure to thrive)</td>
<td>92 (15.3)</td>
</tr>
<tr>
<td>Infant immunisation</td>
<td>84 (13.9)</td>
</tr>
<tr>
<td>Pregnancy related preventive health care (HT, gest. diabetes, folic acid)</td>
<td>13 (2.2)</td>
</tr>
<tr>
<td><strong>Emotional role</strong></td>
<td></td>
</tr>
<tr>
<td>Ensure mother coping (assess mental well being, feelings)</td>
<td>195 (32.3)</td>
</tr>
<tr>
<td>Assess for postnatal depression</td>
<td>82 (13.6)</td>
</tr>
<tr>
<td>Listen &amp; allow time to talk</td>
<td>34 (5.6)</td>
</tr>
<tr>
<td>Debrief pregnancy &amp; labour</td>
<td>26 (4.3)</td>
</tr>
<tr>
<td>Assess sexual relationship</td>
<td>25 (4.2)</td>
</tr>
<tr>
<td><strong>Social role</strong></td>
<td></td>
</tr>
<tr>
<td>Provide support, reassurance, someone to talk to, establish trust</td>
<td>261 (43.3)</td>
</tr>
<tr>
<td>Advise on parenting, what is normal for a baby- crying, sleeping, routines</td>
<td>97 (16.1)</td>
</tr>
<tr>
<td>Assess family dynamics (relationship with partner, children)</td>
<td>92 (15.3)</td>
</tr>
<tr>
<td>Assess home supports (help with housework, cooking, childcare)</td>
<td>23 (3.8)</td>
</tr>
<tr>
<td>Sort out conflicting advice</td>
<td>9 (1.5)</td>
</tr>
<tr>
<td>Assess need for time out</td>
<td>3 (0.5)</td>
</tr>
<tr>
<td><strong>Professional role</strong></td>
<td></td>
</tr>
<tr>
<td>Co-ordinate care (refer appropriately, network)</td>
<td>124 (20.6)</td>
</tr>
<tr>
<td>Provide continuity of care (provide follow-up, “cradle to grave”)</td>
<td>95 (15.8)</td>
</tr>
<tr>
<td>A resource person, educator (information, books, NMA, support groups)</td>
<td>93 (15.4)</td>
</tr>
<tr>
<td>Be available (give sense that you are available home visits, telephone, a/h)</td>
<td>46 (7.6)</td>
</tr>
<tr>
<td>MCHN (liaise and supplement role)</td>
<td>38 (6.3)</td>
</tr>
<tr>
<td>To act as an advocate</td>
<td>4 (0.7)</td>
</tr>
</tbody>
</table>
3.3.6 Dealing with common postnatal problems

The survey listed 21 problems which may be encountered following childbirth. GPs were asked to state whether they felt very confident / fairly confident / not confident to deal with the problem. Ideally, all GPs would feel very confident about their management of any clinical problem; in practice, this is unlikely. This section of the survey was to determine the level of confidence that GPs had to deal with common and important postnatal problems; the kind of problems which may be appropriate to target at the routine postnatal check-up. In the analysis of the data GPs who chose ‘very confident’ about a particular item are compared with GPs who chose ‘fairly confident’ or have ‘no confidence’. Table 3.10 shows the level of confidence of the surveyed GPs in dealing with postnatal problems.
Table 3.10: Confidence of general practitioners to deal with postnatal problems

<table>
<thead>
<tr>
<th>Condition</th>
<th>Very confident</th>
<th>Fairly confident</th>
<th>Not confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraception</td>
<td>601 (84.2%)</td>
<td>110 (15.4%)</td>
<td>3 (0.4%)</td>
</tr>
<tr>
<td>Mastitis</td>
<td>532 (74.6%)</td>
<td>178 (25.0%)</td>
<td>3 (0.4%)</td>
</tr>
<tr>
<td>Immunisation concerns</td>
<td>516 (72.3%)</td>
<td>195 (27.3%)</td>
<td>3 (0.4%)</td>
</tr>
<tr>
<td>Constipation / haemorrhoids</td>
<td>469 (65.8%)</td>
<td>242 (33.9%)</td>
<td>2 (0.3%)</td>
</tr>
<tr>
<td>Vaginal discharge</td>
<td>422 (59.2%)</td>
<td>282 (39.6%)</td>
<td>9 (1.3%)</td>
</tr>
<tr>
<td>Nipple problems</td>
<td>353 (49.4%)</td>
<td>332 (46.5%)</td>
<td>29 (4.1%)</td>
</tr>
<tr>
<td>Tiredness / exhaustion</td>
<td>332 (46.6%)</td>
<td>371 (52.0%)</td>
<td>10 (1.4%)</td>
</tr>
<tr>
<td>Sexual issues</td>
<td>321 (45.0%)</td>
<td>372 (52.2%)</td>
<td>20 (2.8%)</td>
</tr>
<tr>
<td>Vaginal bleeding</td>
<td>291 (41.1%)</td>
<td>332 (46.9%)</td>
<td>85 (12.0%)</td>
</tr>
<tr>
<td>Back pain</td>
<td>280 (39.2%)</td>
<td>412 (57.7%)</td>
<td>22 (3.1%)</td>
</tr>
<tr>
<td>Low milk supply</td>
<td>265 (37.3%)</td>
<td>346 (48.7%)</td>
<td>100 (14.1%)</td>
</tr>
<tr>
<td>Caesarean wound pain</td>
<td>234 (33.0%)</td>
<td>438 (61.7%)</td>
<td>38 (5.4%)</td>
</tr>
<tr>
<td>Relationship problems</td>
<td>233 (32.8%)</td>
<td>425 (59.9%)</td>
<td>52 (7.3%)</td>
</tr>
<tr>
<td>Infant crying</td>
<td>226 (31.8%)</td>
<td>450 (63.3%)</td>
<td>35 (4.9%)</td>
</tr>
<tr>
<td>Urinary incontinence</td>
<td>183 (25.8%)</td>
<td>462 (65.1%)</td>
<td>65 (9.2%)</td>
</tr>
<tr>
<td>Infant vomiting</td>
<td>184 (25.8%)</td>
<td>473 (66.3%)</td>
<td>56 (7.9%)</td>
</tr>
<tr>
<td>Postnatal depression</td>
<td>182 (25.7%)</td>
<td>447 (63.2%)</td>
<td>78 (11.0%)</td>
</tr>
<tr>
<td>Parenting problems</td>
<td>177 (25.0%)</td>
<td>470 (66.3%)</td>
<td>62 (8.7%)</td>
</tr>
<tr>
<td>Perineal pain</td>
<td>165 (23.3%)</td>
<td>462 (65.3%)</td>
<td>80 (11.3%)</td>
</tr>
<tr>
<td>Neonatal jaundice</td>
<td>158 (22.2%)</td>
<td>369 (51.8%)</td>
<td>185 (26.0%)</td>
</tr>
<tr>
<td>Faecal incontinence</td>
<td>93 (13.0%)</td>
<td>333 (46.7%)</td>
<td>287 (40.3%)</td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values

3.3.7 An early check-up

To assist with planning the randomised trial of a change in the timing of the postnatal check-up (reported in chapter 4) GPs were asked whether they believed that seeing a woman within two weeks of childbirth was likely to prevent problems. Eighty-nine (12.5%) agreed strongly, 234 (32.8%) agreed, 236 (33.1%) were uncertain, 146 (20.4%) disagreed and 9 (1.3%) strongly disagreed. This demonstrates a genuine uncertainty amongst general practitioners as to their ability to prevent postnatal problems and justifies the need to investigate the timing of the postnatal check-up and the effectiveness of...
general practice postnatal care. Interestingly, sixteen general practitioners chose to comment on the idea of an early check up at the end of the survey where there was space for 'any comments you would like to make'. All of these additional comments were positive towards an early check-up. Examples of the comments made-

"...a 2 week postnatal visit is a brilliant idea." "... I have just sent a letter to my local hospital...suggested a 2 week postnatal visit appointment be made."

"I am sure more formal early review would be of considerable benefit in preventing problems"

-show that some GPs believe an early check-up would be able to prevent problems. Their beliefs were tested in the trial reported in the next chapter.
3.4 Discussion

The survey was large and quite complex, dealing with a perceived special interest area of general practice and yet the number of GPs required to meet the aims of the study was exceeded using a standard Dillman approach (Dillman 1978).

3.4.1 Sampling method

The method of sampling GPs via the Divisional databases was used in this study to see whether it overcame some of the difficulties of using other sampling frames as discussed by Saltman and Mant (1992). The Divisional databases provided access to GPs who were Vocationaly Registered and those who were not. At the time of this study divisions were focussing on developing comprehensive databases of all members and potential members. The final sampling frame consisted of around 50% of Victorian GPs.

However, this method of sampling had many practical difficulties. Firstly, it was very time consuming. Each division had to be approached to determine whether they had a comprehensive database, letters asking permission to use the database had to be sent, management committees had to meet and agree to the request, administrative staff had to prepare and send the lists. Secondly, on receipt of the lists of names checks had to be made to delete any names which appeared on more than one list and gender of doctor had to be identified. Finally, the random sample of male GPs and all female GPs could be compiled.

Since the time of the study many more GPs have become vocationally registered (~90%) and divisions have shifted their focus to project development and continuing medical education. It would now appear reasonable and more feasible to use the HIC to obtain a sample of GPs for a survey such as reported here. However, the effect that the ‘modified synchronised sampling’ technique, used by the HIC to obtain lists of GPs, has on the sample obtained needs to be evaluated.
The surveyed GPs come from a community derived sample which is large enough to identify the associations of practice location, gender and qualifications on postnatal care. Unfortunately, there are no comparison data from any earlier community derived sample of GPs to determine how much change has occurred in the nature and provision of postnatal care. However, this study provides baseline comparison data for future studies.

3.4.2 Postnatal care is routine general practice

Using a conservative estimate of postnatal care (provision of the six week check), and accounting for the oversampling of female GPs in the study, 90% of Victorian GPs are caring for women in the early weeks following childbirth. Postnatal care is not the domain of the GP with a special interest. The majority of GPs surveyed believe they have a role in postnatal care, including breastfeeding and postnatal depression.

The training requirements for the provision of antenatal, postnatal and intrapartum care by general practitioners have recently been revised by the Joint Consultative Committee of the RACGP and the RACOG (Oats 1994). They recommend a two-tiered system whereby GPs wishing to provide antenatal and postnatal care only can undertake a three-month certificate course and those wishing to provide intrapartum care as well can undertake a six-month diploma course. Change would appear to be appropriate as in this study only 38% of those providing postnatal care held the diploma of obstetrics. Despite this change being a move in the right direction the data from this study raise some doubts about the suitability of the training requirements.

It is of interest to note that the data presented in this chapter found very few differences between those GPs who possessed a postgraduate qualification such as the Diploma of Obstetrics and those who did not. This finding seems to indicate that either the training required for the Diploma lacks a postnatal focus or training that is provided is not effective in imparting knowledge about
postnatal care. At this point in time there is little evidence to direct the focus of the postnatal check-up or postnatal care in general. This lack of evidence makes it difficult to recommend suitable training requirements. More research is needed to determine the most appropriate guidelines for postnatal care.

Until evidence-based guidelines are developed for postnatal care it will be necessary to rely upon lesser levels of evidence such as ‘expert consensus guidelines’. Such guidelines should be seen as interim guidelines and not as a replacement for guidelines based on the findings of randomised controlled trials.

With these limitations in mind postnatal care should form an integral part of the curriculum for postgraduate training in general practice; as it is highly unlikely that 90% of GPs will undertake the certificate course offered by the RACOG, even if training positions were available. Some maternity hospitals require that GPs wishing to undertake shared care hold the diploma of obstetrics. No doubt these hospitals will change this policy to allow GPs who hold the new certificate to undertake shared care. However, it would seem unlikely that there will be enough training positions to accommodate all GPs wishing to undertake shared care. Indeed, one could also question the need for a full-time three-month residency course to enable GPs to undertake routine postnatal care and other shorter part-time courses should be considered.

The suggested training for both the certificate and diploma course appear lacking in their coverage of postnatal care considering the high level of postnatal morbidity in our community. Problems such as vaginal discharge, backache, difficulty voiding, abnormal bleeding, urinary tract infection, side effects of epidural anaesthesia, urinary incontinence and stitch breakdown are common and many persist for at least 18 months after delivery (Glazener et al. 1993a). Similar problems have been identified in a recent survey of Victorian women (Brown & Lumley in press).
3.4.3 What should happen at the postnatal check-up?

This study deals with what GPs believe should constitute routine postnatal care and not with what they actually do. Most GPs believed they were clear about what should take place at the postnatal check-up. This may mean they would not actively seek information about the routine postnatal check-up.

The routine pelvic examination

The routine pelvic examination has formed the basis of the postnatal check-up since its inception. Historically, as discussed in Chapter 1, the routine pelvic examination began in an attempt to prevent cervical cancer; by treating postpartum cervical trauma and to prevent pelvic pain and back pain by ‘correcting’ retroverted uteri and pelvic ‘congestion’. Though our current understanding of the pathological basis for these conditions has changed dramatically, the belief in routine vaginal examination persists. It is more than a decade since Strube (1980) questioned the need for the pelvic focus of the postnatal check-up. Since that time two studies have been undertaken which conclude that the routine vaginal examination should be abandoned (Bowers 1985; Sharif et al. 1993) and Noble (1993) has recommended the time taken could be better spent talking with the woman.

The survey findings indicate that GPs (particularly females) still place considerable importance on conducting a routine pelvic examination with three-quarters of the GPs believing it to be essential to the ideal postnatal check-up. Almost half of the GPs surveyed believed that the routine vaginal examination was likely to reveal a problem that needed to be addressed yet this is not substantiated by the studies of Bowers (1985) or Sharif & Clarke (1993). If a careful history were taken about vaginal bleeding, perineal pain, dyspareunia and the timing and result of the last cervical smear, a GP would be able to undertake a pelvic examination if clinically indicated.

The use of the postnatal check-up as a time for opportunistic cervical screening needs to be challenged. Australia now has a National cervical screening policy
which recommends two-yearly Pap tests for women between 20 and 69 years of age (Hirst & Mitchell 1996). An Australian case-control study designed to investigate the factors associated with false-negative cervical cytology reports found that 13% of the case slides were taken during pregnancy or the postpartum compared with 9% of the control slides (Mitchell and Medley, 1995). However, this result was not statistically significant as there were only 71 case slides analysed in the study and more than 700 case slides would be required to detect a 4% difference.

The postnatal check-up may not be an ideal time to undertake cervical screening. In accordance with the National guidelines cervical screening should be undertaken if it is two years since the last smear, there is a history of an abnormal smear which requires follow-up or clinical symptoms indicate it is necessary. However, GPs should be made aware that it is best to avoid taking pap tests in the early postnatal months as there is likely to be an increase in false-negative reports. This being the case it follows that most women would not require an internal examination at the routine postnatal check-up. This would allow the GP more time to listen to the concerns of mothers within general practice time constraints. However, another aspect must be considered; how women feel about having, or not having, a vaginal examination at the check-up. This issue is discussed in Chapter 5.

The majority of GPs agreed with routine examination of the perineum and pelvic floor. Research into this area is lacking and no evidence exists to support or refute the need for routine perineal examination. However, adjusted odds ratios showed that female GPs were three times more likely to agree than male GPs, and younger GPs were less likely to agree than older GPs. The lack of research into this aspect of postnatal care makes the discussion of these results challenging.

Perineal examination is included in the routine examination checklist in recent standard texts for medical students and general practice registrars (Beischer &
Mackay 1986; Murtagh 1994). The psychological effect of this examination on the woman has not been studied; despite this, it has been suggested that it is most important to check the perineum and to get the woman to examine herself using a mirror: "...the patient is encouraged to inspect herself with a mirror. Her partner may want to look too. This helps to allay his fears and fantasies about the residual effect of birth." (Jennings & Edmundson 1980). To undertake this kind of examination at the check-up would require a very skilled and sensitive practitioner and requires careful research to determine the effect on women and their partners. Routine perineal examination is further discussed in Chapter 5 where views of GPs and mothers are compared. It would appear that the main indication for performing such an examination in the absence of clinical symptoms would be to reassure the woman that healing had taken place. Medically, it would seem reasonable to suggest that perineal examination is performed only if clinically indicated, by symptoms such as perineal pain and/or pain on intercourse. The acceptability of this approach to women should be assessed.

Examination of the pelvic floor can be useful for women who have difficulty knowing how to perform pelvic floor exercises as it allows the GP to instruct women whether they are contracting the right muscle groups. However, there has been no research into the benefit or otherwise of routinely assessing, or only assessing if symptomatic, the pelvic floor at six weeks. A randomised trial comparing routine pelvic floor exercise instruction with an intensive program found no differences in the degree of urinary or faecal incontinence three months after the birth, but found less perineal pain and depression (Sleep & Grant 1987a). Assessing the strength of the pelvic floor requires a vaginal examination and currently there is no evidence to recommend it as a routine part of the postnatal check-up. It may seem practical to offer it to women who are unsure about performing pelvic floor exercises, as long as there is appropriate information and clinical help that can be offered if a problem is detected. Whether this approach would make a difference to long term health outcomes is unknown. Routine assessment of pelvic floor function should be
tested in randomised trials as it is invasive and time consuming and has not been shown to be of benefit. It is important that women's needs and feelings be taken into account when assessing the outcomes of such randomised trials.

*Other physical examination at the check-up*

Almost all (91%) the GPs surveyed would recommend routine abdominal examination. The routine performance of this examination would appear to be of little benefit to women. A recent study found no difference in the uterine fundal height between women who had clinically proven endometritis and women who did not (Bergstrom & Libombo 1992). The authors concluded that the only reliable indicators of endo/myometrial infection were fever and uterine tenderness. In the absence of fever and no symptoms on history, the routine abdominal examination is not likely to yield any useful clinical information. Some GPs may use this examination to test the abdominal musculature, the benefits of which have not been studied. It is possible they will identify women with a problem, such as diastasis of the rectus muscle, for which adequate management strategies are needed.

Almost 90% of the GPs surveyed recommended routine blood pressure measurement. It would seem good management to take the blood pressure of any woman who had hypertension during pregnancy, as although most of them will have been 'cured' by the birth of their baby, some will remain hypertensive and should be detected. However, for women who had normal blood pressure throughout pregnancy it seems unnecessary to take the blood pressure; in fact the postnatal woman is likely to have had her blood pressure measured at least 14 times during the previous year. To miss it at the postnatal check-up would seem reasonable if the GP has a normotensive reading on file.

There was more variation in opinion about other examinations that should take place at the postnatal check-up. In assessing the overall results of the survey it is clear from both the self-complete items and the open-ended responses that excessive emphasis is being placed on the routine pelvic examination, which is
not supported by current evidence. A better approach would appear to be an examination which is directed by the woman’s symptoms and needs. It may be that, in one case, a thorough examination of the back is the most important thing to do, whilst in another case it may be that the time would be better used checking for signs of anaemia and allowing the woman time to talk about her feelings of tiredness and exhaustion.

Discussion at the six week check-up

Nearly all GPs believed that infant feeding and contraception should be discussed. This is most appropriate. However, the common physical problems are somewhat neglected; only two thirds would routinely enquire about level of tiredness and a half or fewer about sexual issues, urine, bowel or back problems; despite these being very common problems after birth. Glazener et al (1993) reported that over 80% of women will have at least one of these problems following childbirth. If these physical problems are to be addressed the GP will have to ask about them routinely, as fewer than a half of the women experiencing a problem are likely to seek help. Glazener et al (1993) also found that about 80% of mothers experience problems with their baby’s sleeping, crying and feeding habits in the first eighteen months of life. Most GPs recognise the importance of these issues with only 20% failing to include baby issues in the routine discussion. To meet the health needs of mothers and babies these areas should be addressed by all GPs at the postnatal check.

Depression after birth is a major public health problem; 10-20% of women will be or become depressed in the year after birth. Most of the GPs surveyed believed they had a role to play in the diagnosis and management of postnatal depression, although one quarter believed that a psychiatrist expert in the area should usually manage mothers with depression. This finding suggests that some GPs would benefit from updates in this area.

The GP has a unique opportunity at the postnatal check to detect women with depression and possibly prevent depression. Whilst most GPs recognised the
importance of discussing how a mother was feeling they failed to recognise the importance of focussing on particular aspects of a woman’s life that may be very useful in assisting them to detect problems. Women do not easily volunteer that they are feeling depressed. Indeed, whilst women experiencing depression realise there is ‘something wrong’, only one third will identify this experience as ‘depression’ (Whitton et al. 1996). There is much pressure on women to be seen to be coping, to be a ‘good mother’ and the admission of feeling depressed carries with it a social stigma (Brown et al. 1994). GPs need to be aware of women’s reluctance to seek help and they need to use consulting skills that will facilitate disclosure of women’s problems and concerns. Simply asking a woman how she is feeling, whilst it is a good start, is not likely to identify many women who are depressed.

The postnatal check-up is a ‘missed opportunity’ for many GPs: 41% would not routinely ask about coping with other children, one quarter would not routinely ask about mother’s sleep, one third would not enquire about tiredness and more than half would not routinely address sexual issues, relationship concerns, the opportunity for time away from mothering and help with household work. These issues, if addressed, would help the GP to diagnose depression. In addition, it has been shown that allowing women who are depressed time to talk results in less depression (Holden et al. 1989). Hence, using the postnatal check-up as an opportunity to talk may also have some therapeutic effect.

3.4.4 GP characteristics influencing their approach to postnatal care

Univariate analysis shows that a GP’s beliefs are associated with factors such as gender, age, practice location, obstetric practice and qualifications. After adjusting for the other key characteristics, gender remains a major influence on a GP’s beliefs about postnatal care. Obstetric practice, age, practice location and qualifications play a more minor role.
This finding adds to the growing literature that shows that male and female GPs practise differently (Branthwaite & Ross 1988; Britt et al. 1996; Chambers & Campbell 1996). It supports the findings that female GPs are more likely to identify and manage psychosocial issues (Britt et al. 1996). This may be due, in part, to the finding that female GPs express high levels of satisfaction with the psychosocial aspects of general practice work (Branthwaite & Ross 1988). This has important implications for the likelihood of diagnosing postnatal depression and parenting issues.

Recent Dutch (Van Den Brink-Muinen et al. 1994) and Australian studies (Britt et al. 1996) have found that women are more likely to consult a female GP (if available) for problems to do with the genital tract or breasts. Postnatal problems such as perineal pain, painful or problematic sexual intercourse, vaginal discharge or bleeding, mastitis and breastfeeding problems may therefore present more often to female GPs. Female GPs, on average, spend more time with the patient and deal with more problems per consultation than their male colleagues (Britt et al. 1996; Van Den Brink-Muinen et al. 1994). To enable the development of educational resources for GPs, which meet the differing needs of male and female GPs, these gender differences need to be researched further. Interestingly there were no gender differences found with regard to the common physical problems following birth; female GPs were no more likely to ask about common physical problems.

3.4.5 Confidence to deal with postnatal problems
There were only five areas, out of the 21 asked about, that more than 50% of GPs felt very confident to deal with: contraception (84.2%), mastitis (74.6), immunisation concerns (72.3%), constipation/haemorrhoids (65.8%) and vaginal discharge (59.2%). GPs do not feel very confident about managing many of the common postnatal problems and would benefit from information and guidelines to assist them in managing these conditions.
3.5 Conclusion

Most general practitioners (~90%) are involved in postnatal care. Hence, postnatal care is part of routine general practice. Most GPs believe that general practice has an important, potentially powerful role to play in providing postnatal care. Most GPs support the concept of routine postnatal review. Many find the practice of caring for women after birth rewarding, yet lack confidence in dealing with common postnatal problems.

This survey gave GPs the opportunity to have their say about what should occur at the routine postnatal check-up. The results raise four major areas of concern about the routine postnatal check-up:

1) there is an over emphasis on the routine pelvic examination,
2) there is an under emphasis on emotional and social issues (although most GPs acknowledge the importance of discussion about how the mother feels, they underrate the importance of relationship issues and social support),
3) the common postnatal physical problems, including sexual issues, are being overlooked, and
4) few GPs feel 'very confident' to deal with many of the common postnatal problems.

These findings suggest the need for educational programs at both the undergraduate and postgraduate levels to provide GPs with current, evidence based material about postnatal care. This work would need to be undertaken before a change in the content of the postnatal check-up could occur.

With regard to timing of the postnatal check-up, there was a level of uncertainty. GPs were spread from strongly agree to strongly disagree about whether an early check-up could benefit maternal health. This genuine uncertainty, along with the suggestion of researchers (Bick & MacArthur 1995b; Bowers 1985; Glazener et al. 1993b; Mabray 1979; MacArthur et al. 1993) that the timing of the check-up should be reviewed, forms the basis of the following chapter.
CHAPTER FOUR

THE POSTNATAL CARE PROJECT:

a randomised controlled trial of an early postnatal check-up

CONTENTS

4.1 Background
4.2 Method
  4.2.1 Choice of method
  4.2.2 Objectives
  4.2.3 Sample size
  4.2.4 Study design
  4.2.5 Outcome measures
  4.2.6 Data processing
  4.2.7 Analysis
  4.2.8 Limitations of trial
  4.2.9 Ethical considerations
4.3 Results
  4.3.1 Recruitment and response rates
  4.3.2 Demographic comparisons
  4.3.3 The postnatal check-up
  4.3.4 Health and well-being (SF36)
4.4 Discussion
  4.4.1 Recruitment and follow-up
  4.4.2 Limitations of the trial
  4.4.3 Generalisability of findings
  4.4.4 The postnatal check-up
  4.4.5 Use of the SF 36
  4.4.6 Depression
  4.4.7 Physical health
  4.4.8 Breastfeeding
  4.4.9 Satisfaction with GP care
  4.4.10 Health service use
4.5 Conclusions

4.1 Background
Chapter 1 established that, despite the fact that most women attend a doctor for a routine postnatal check-up six weeks after childbirth, the time following childbirth is one of ill-health for many women, with many problems going unreported and untreated. Added to this the role of health professionals in prevention, recognition and treatment of these problems has not been widely researched (Glazener et al. 1993b). Recently, the content and timing of this traditional check-up have been questioned and a call has been made for a reassessment of postnatal medical care (Bick & MacArthur 1995a; Bick & MacArthur 1995b; Glazener et al. 1993a; Glazener et al. 1993b; Gruis 1977; Mabray 1979).
**Choice of intervention**

Changing the timing of the routine postnatal check-up seemed like a good place to start in re-assessing postnatal care in general practice. In 1977 Gruis recommended that all women be reviewed by a doctor one to two weeks after giving birth (Gruis 1977). Many GPs agreed with this idea; both those interviewed in-depth in the 1991 shared care study (Halloran et al. 1992) and those surveyed in 1995 (Chapter 3). If successful, a change in the timing of the routine postnatal check-up could be recommended within current models of care for little or no extra cost.

The issue of time is common in obstetrics and perinatal research (time spent in each stage of labour, timing in delivery of the second twin, the placenta etc). For example; trials have been undertaken on the effect of time of discharge on breastfeeding rates (Renfrew & Lang 1996) and the importance of the time of first contact between mother and baby (Ringler et al. 1975; Thomson et al. 1979).

The Postnatal Care Project focussed on the timing of the postnatal check-up. Alternative trials such as: no check-up, flexible timing of check-ups, additional check-ups or a change in the content of the check-up were also possible. As the literature (Gruis 1977, Mabray 1979, Halloran et al. 1992) suggested that an earlier timing may be beneficial to women and this idea was supported by general practitioners surveyed as a part of this thesis it was decided to test the effect of an early postnatal check-up.

In order to test the effect of an early check-up the exact timing for the early check-up had to be decided upon. A meeting of the Reference Group was used to discuss this issue. The check-up was scheduled for one week after discharge from hospital, based on the findings reported in Chapter 2. This timing was chosen as many women and babies begin to make visits to a GP in the second week following childbirth (see Chapter 2, Figures 2.1 and 2.2). A check-up one week after discharge from hospital would give the GP the opportunity to
be involved in management of early problems such as perineal pain, nipple problems, difficulty adjusting and settling in with a new baby. It was early enough to be able to implement plans that may help with things like nipple pain and exhaustion, before they became entrenched problems that lead to cessation of breastfeeding.

4.2 Method

4.2.1 Choice of method

There is a voluminous literature on health care evaluation and it is not appropriate in this thesis to deal with the issue in detail. The key question in the Postnatal Care Project was to determine the effect of a routine postnatal visit to a GP one week after discharge from hospital compared with the traditional six week postnatal check-up. To evaluate the effect of this intervention required two groups of women, one group having an early check-up and the other having a six week check-up. Ideally, the only difference between these two groups should be their assignment to a different postnatal check-up. To attempt to achieve this ideal a randomised controlled trial design was chosen on the grounds that it minimises selection bias and potential confounding and allows meaningful outcome measurements to be made (Daly et al. 1991).

Randomised trials are being used more often to evaluate health care interventions in general practice and the quality of reporting such trials has gradually improved (Silagy & Jewell 1994; Silagy et al. 1994; Sonis & Joines 1994), although there is still scope for more improvement (Altman 1996). With the emergence of ‘evidence-based medicine’ there has been a greater emphasis on the need for randomised trials as the gold standard for assessing the effects of different interventions (Altman 1996; Evidence-Based Medicine Working Group 1992; Sackett & Rosenberg 1995; Silagy & Lancaster 1995).

The shift towards evidence-based medicine and randomised controlled trials is not without critics (Kernick 1997; Pringle & Churchill 1995). However, rather
than dismiss the method for general practice research, due to the shortcomings of many of the published trials, it would appear better sense to adapt the method to the general practice setting. To ensure successful implementation of randomised trials in general practice it is important to consider certain issues. In particular, a trial should be relevant to the setting of general practice and should involve general practitioners from the earliest stages of trial design (Kernick 1997). The Postnatal Care Project attempted to address these issues and a full description of the trial design and management follows.

There have been few randomised trials dealing with postnatal care. Maternal physical health has been relatively neglected. Petrowski reports on a study where 56 mothers were randomised to receive instruction about: care of the baby’s umbilical cord, how to ‘burp’ a baby, perineal care and rest, activity and exercise (Petrowski 1981). Only 36 mothers completed all outcome measures, yielding a sample size too small to test the pre-specified hypotheses. More trials have been undertaken to test various hypotheses about breastfeeding problems (Herd & Feeney 1986; Nicholson 1985; Redman et al. 1995) and a series of trials have been undertaken to test management protocols for perineal care (Everett et al. 1992; Klein et al. 1994; Sleep et al. 1984) and urinary incontinence (Sleep & Grant 1987a). None of these trials was in a general practice setting.

The only postnatal trial undertaken in a general practice setting, reported in the literature, is the Health Visitor Trial (Holden et al. 1989). This trial involved health visitors providing non-directive counselling to women experiencing postnatal depression. It is an example of a well-conducted pragmatic trial that was effective in reducing the number of women with depression at a three month follow-up. However, general practitioners were only involved in that they supported the trial and allowed for recruitment of women to take place in their surgeries, via child health clinics. The Postnatal Care Project is one of the first trials to test a ‘general practice intervention’ and begin the re-assessment of postnatal care in Australian general practice.
4.2.2 Objectives

To determine if a visit to a GP one week after hospital discharge rather than six weeks postpartum resulted in the following outcomes-

1. Increased breastfeeding rates from 50% to 65% at three months.
2. Improved patient health status as scored by the Short Form 36 (SF36).
3. Reduced mean scores on the Edinburgh Postnatal Depression Scale (EPDS) at three and six months postpartum.
4. Decreased rates of physical problems measured by self-report.
5. Increased levels of satisfaction with general practice care.
6. Decreased use of health care providers as determined by patient kept health visits diary

4.2.3 Sample size

Sample size calculations were made using the breastfeeding rates of 50% at three months and 35% at six months for the Victorian population (Health and Community Services 1994). To detect a 15% increase in breastfeeding rates 650 women (allowing for a 70% response rate to mail out surveys) were required ($\alpha=0.05$, $\beta=0.20$). This sample size was large enough to detect changes in scores across each domain of the SF 36 for conditions such as low back pain, which results in a score which is about 20 points lower than the general population on the physical functioning and role-emotional domains of the SF 36 (Garratt et al. 1993).

The sample size also enabled detection of clinically significant changes in scores on the Edinburgh Postnatal Depression Scale of 0.23 x sd, from a mean score of 7.6 (standard deviation 4.8) to less than 6.5.

It was anticipated to recruit 650 women, between February and December 1995 (inclusive), by recruiting at least seven women per centre per week from 10 - 15 eligible women.
Reference Group

A reference group was formed to advise on study design and practical issues surrounding the trial. The reference group consisted of two midwives and an obstetrician drawn from the participating hospitals, a maternal and child health nurse from a centre near the city recruitment area, three general practitioners selected to represent a GP obstetrician, a GP with paediatric interest and a GP from a community health centre with a large shared care program, a consumer representative nominated by the consumer group ‘Maternity Alliance’ and a State government representative nominated by the Department of Human Services.

The reference group met formally on three occasions. The three meetings were used to 1) discuss the design of the trial, 2) the implementation of the trial protocol and 3) to discuss the trial outcomes. The reference group provided the forum in which to present a draft trial protocol. The draft trial protocol was discussed in detail and a number of refinements were made.
4.2.4 Study design

The study used a randomised controlled trial design (Figure 4.1). The intervention consisted of a referral letter and appointment date for a postnatal visit with a GP of the patient’s choice one week after discharge from hospital. The standard care consisted of a referral letter and appointment date for a postnatal visit with a GP of the patient’s choice six weeks after childbirth.

For a woman to be asked to enter the trial she had to:

1. be a mother of a liveborn baby at 37 weeks or greater gestation as determined by dates or ultrasound if dates uncertain
2. be able to read and write English
3. consent to visit her GP for postnatal check
4. have no arrangements already made for early review by her GP
5. nominate her own GP or choose from shared care providers
6. give informed consent
7. be able to be discharged from hospital on the same day as her baby.

This study was concerned with the postnatal check-up provided by general practitioners. Only public hospital patients were invited to participate in the trial as most privately insured women receive maternity care from obstetricians and return to their obstetrician for their routine postnatal check-up.

Women were excluded from the trial if:
1. they chose to visit GPs involved in trial reference group (4 GPs)
2. antenatal care was provided by a teenage clinic (by hospitals request)
3. delivery was by emergency caesarean section at metropolitan hospital
   (by request of one hospital)

Location
To increase generalisability of the trial findings recruitment was undertaken at one metropolitan and one rural hospital. The University of Melbourne had established working links with the recruitment hospitals which was seen to be important in ensuring the successful completion of the trial.

Initially, a discussion was held by phone with the Medical Director of each hospital to determine their level of interest in taking part in the project. Following this a letter of invitation and a detailed outline of the trial was sent to each Medical Director. The Medical Directors sent the letter and trial outline to the respective hospital research and ethics committee. Both research and ethics committees gave approval for the trial to be undertaken at their hospital.

Postnatal Care Project staff
Undertaking a trial of this size requires rigorous design, sound organisation and sufficient well trained research personnel. These requirements are costly and
time consuming. Considerable time (nine months) and effort went into securing additional funds to undertake the trial component of the thesis. Funds were obtained from the Royal Australian College of General Practitioners - Trainee Scholarship and Research Fund. These funds enabled a part-time research assistant (PC) to be employed to assist with the large task of data management and to act as the metropolitan randomisation centre. Two midwives (MW, JP) were employed on a casual basis to recruit women at the rural hospital and one research assistant (CG) was employed on a casual basis during busy times to maximise recruitment at the metropolitan hospital.

**Informing the hospital staff**

Support of the hospital midwifery staff was essential for the smooth implementation of the trial. Meetings were held with postnatal ward staff to outline the trial, answer questions and devise the best way to recruit women so as to ensure the continued efficient running of the ward. Two copies of a detailed information booklet for ward staff were left on each ward (Appendix II, 4.1).

It was agreed that following recruitment of a woman to the trial the recruitment officer would note on the hospital bed chart whether the woman was to have a six week or one week check-up to ensure that hospital staff reinforced the timing of the check-up and did not become confused or confuse the woman as to when her visit should occur.

**Trial entry - recruitment procedure**

**Project logo:**

To give the project appeal and a recognisable identity a logo was developed by a graphic designer (Appendix II, 4.2). It was hoped that the logo would remind women of their involvement in the trial and prompt them to return the postal surveys.
Antenatal introductory pamphlet:
All potentially eligible women were given an information pamphlet (Appendix II, 4.3) before 36 weeks gestation. The pamphlet outlined the trial, the randomisation procedure, introduced the researchers and informed the women that they might be approached following the delivery of their baby to participate in the trial. The aim of the pamphlet was to facilitate the recruitment process by forewarning women of the trial; allowing them time to consider their possible involvement rather than approaching them for the first time on the postnatal ward, soon after childbirth. At the rural centre the pamphlet was distributed at antenatal education sessions and during antenatal check-ups. At the metropolitan centre the pamphlet was available for women to take as they arrived for their antenatal check-up.

Postnatal ward poster:
A poster briefly outlining the trial (Appendix II, 4.4) was placed in a prominent position in the nursery of each postnatal ward. This alerted women to the possibility that they might be approached to take part in the trial.

Recruitment
Before commencement of the trial a detailed recruitment procedure was developed and a booklet produced (Appendix II, 4.5). Development of the recruitment procedure followed guidelines for recruitment of subjects to clinical trials outlined by Bulpitt (Bulpitt 1983).

A meeting of the reference group was used to discuss and refine the proposed recruitment procedure. Piloting of the developed recruitment procedure took place at the metropolitan hospital, with 10 recent mothers and 4 midwives. The final recruitment procedure (Appendix II, 4.5) was then taught to MW, JP, and CG by the use of written materials, discussion and role-play. MW, JP, and CG were encouraged to keep notes on the recruitment procedure and twice to three times weekly telephone meetings were held between myself (JG) and the rural centre midwives (MW, JP) in the first months of recruitment. JG was
available at all times for discussion of any concerns. Details of all contact regarding recruitment procedures were kept in a notebook.

On arrival to the ward hospital staff were consulted to determine which women were suitable to be approached. The intention was to inform women at a convenient time about the nature of the trial.

A detailed, plain English, information sheet (Appendix II, 4.6) was given to all women meeting the entry criteria prior to discharge, on day 2 or 3 following childbirth. After answering any questions the randomisation procedure was made clear, using a visual aid (Appendix II, 4.7). The right to withdraw was explained. Informed consent was gained and a consent form (Appendix II, 4.8) signed. All women giving informed consent and meeting the entry criteria were included in the trial. Women who did not wish to take part in the trial were asked to provide limited information; with their agreement the mode of delivery, maternal date of birth, parity, birthweight and a brief statement on why they did not wish to take part were obtained. An example of the form is included as Appendix II, 4.9.

If a woman wished to take part in the trial but could not nominate a GP the hospital gave permission for the women to have access to a list of GPs affiliated with the hospital. At the metropolitan hospital the list of GPs providing shared antenatal care was used. At the rural hospital a list of GPs practising in the area was available. Women were given the name, address and telephone number of at least three GPs near to their home prior to allocation to intervention or standard care group.
**Allocation to intervention or standard care group**

Once a woman had consented (by signing the consent form) to be involved in the trial her name, address, contact numbers and entry criteria form (Appendix II, 4.10) were completed. This form was then used to enter the woman’s details onto the central trial data base located at the Department of Public Health and Community Medicine (DPH & CM), University of Melbourne. It also served to double check that the woman satisfied all entry criteria and contained a section detailing every step of the recruitment procedure to be ticked off as completed. Following this, the recruitment officer completed an entry survey, (Appendix II, 4.11) coded by number, which provided details of demographic characteristics and obstetric history which were subsequently used to ensure that randomisation had resulted in equal groups. Each form for the trial was printed on different coloured paper to facilitate data completion and management.

After completing the forms a phone call was made to the randomisation centre to inform them of the name and code number of the woman. The randomisation centre then allocated the woman to either intervention or standard care group using a randomisation schedule (Appendix II, 4.12).

Randomisation schedules (Appendix II, 4.12) were prepared by the research assistant (PC) using variable block randomisation, stratified by recruitment location and multiple birth. To ensure that the number of patients to be recruited before balance was achieved was not obvious, or able to be guessed, variable block randomisation was used (Bulpitt 1983).

The metropolitan randomisation centre was the research assistant (PC). The rural randomisation centre was the staff of the hospital Enquiries Desk. JG, MW, JP or CG did not have access to the randomisation schedules at any time during the recruitment phase of the study. This process of treatment allocation was undertaken to avoid bias in the randomisation procedure that may occur when lesser measures, such as opaque envelopes, are used.
**Intervention and standard care packages**

The intervention to be tested in the Postnatal Care Project was a change in timing from a six week postnatal check-up to a one week post hospital discharge check-up. The difference in timing of the postnatal check-up was the only difference between the two groups.

Women in the trial received:

- a discharge letter to take to a GP of their choice at six weeks postpartum for the standard care group (Appendix II, 4.13) or at one week post discharge for the intervention group (Appendix II, 4.14). These letters were made as similar as possible and based upon the outcome of discussions held during a reference group meeting. There were concerns that some GPs might believe they had to undertake a routine pelvic examination at the one week check-up. It was stated clearly in the letter for the one week visit that a routine pelvic examination was not required as a part of the trial design and should only be undertaken on clinical grounds (Appendix II, 4.14).
- a copy of the trial information sheet (Appendix II, 4.6) to give to their GP at their postnatal visit.
- a ‘Health Contacts Card’ (Appendix II, 4.15) on which to record their contacts with health care professionals in the three months following birth. A second Health Contacts Card was sent to the women at three months postpartum with the first outcome survey.
- a ‘fridge magnet’ with the Postnatal Care Project logo (Appendix II, 4.2) and contact number. The magnet was to act as a reminder to women that they were a part of the study and to prompt them to attend their postnatal visit and to remember to complete their Health Contacts Card. It also ensured that women would be able to contact JG if they had any questions or concerns about the project.
- a change of address card (Appendix II, 4.16). Women were asked to complete and return the card if they changed address during the course of the study. It was suggested that the change of address card could be attached to their refrigerator with the magnetic logo.
4.2.5 Outcome measures

Mail-out surveys were sent at three (Appendix II, 4.18) and six (Appendix II, 4.19) months postpartum to the standard care and intervention groups to assess health outcomes in the three major areas of study: postnatal depression, breastfeeding and physical health and well-being.

Health Contacts Card

Measuring compliance with the intervention in this trial and use of health services relied on the self-report of participating women. As the first survey was sent three months postpartum it was felt that there was the possibility (although unlikely at such an important time in women's lives) that some women might have forgotten they had attended a one week visit. As a back-up measure women were asked to record on a simple card (Appendix II, 4.15) each contact they had with a health professional, including the date of their check-up.

Survey design

The surveys were presented as A5 booklets in coloured card covers with the project logo for easy identification. The code number was recorded in the right hand corner. 'Reva Green' was used for the cover of the three month survey and 'Oriel Gold' for the six month survey. These colours were used to ensure that women would be able to easily identify the survey amongst all their other mail and prompt them to complete and return the survey. The colour coding also aided with data management and entry procedures.

The aim of survey design was to use validated scales and items used in other maternity surveys where possible and to include new items only if suitable items could not be found. This approach was used to increase the reliability and validity of the outcome measures and to enable comparison with other data collected on maternity services. The validated instruments used as outcome measures for the trial have been discussed in detail in Chapter 1, Section 1.2.
The three and six month surveys included the EPDS (see Chapter 1, Section 1.2.3) the SF 36 (see Chapter 1, Section 1.2.2) and items from the 1993 Survey of Recent Mothers (see Chapter 1, Section 1.2.1) which asked about common problems encountered and the sources of help. A copy of the three month survey is in Appendix II, 4.18, the six month survey in Appendix II, 4.19.

In the three month survey items were included which covered in detail the postnatal check-up. Women were asked when they went for their check-up, whether they saw a male or female GP, a new or familiar GP, what happened and what was discussed during the visit and how satisfied they were with the visit. There was also space for comments about what they were happy or unhappy about.

A section was included to update some demographic details such as return to work, childcare arrangements, smoking status and change of address.

-Revising the surveys
Working drafts of the three and six month surveys were reviewed by the project reference group, two researchers working in the area of maternal satisfaction with maternity care and 5 academic general practitioners, after which draft surveys were produced.

Piloting of the surveys took place firstly with 6 women with young children via personal networks; minor layout and wording changes were made and one item was added to the recent problems list "difficulty coping with the demands of other children". Piloting of the survey took place with recent mothers at two maternal and child health centres. The mothers completed the survey and were then interviewed. Women were asked whether the questions were clear, how they felt about completing the survey, how relevant the items were to them and any general comments. Piloting occurred on four occasions with between 4 and 6 women. Following the first two piloting sessions a few minor wording changes were made. During the final two piloting sessions no new suggestions
were made and women were positive about the experience of completing the survey.

**Follow-up of trial participants**

*Thank-you for participating letter:* After discharge from hospital all women were sent a letter thanking them for taking part in the trial, reminding them to complete their health contacts card and asking them to call if they had any questions (Appendix II, 4.20). A notebook was kept to record the details of any phone calls that were made by a trial participant.

*Surveys at three and six months:* Surveys (Appendix II, 4.18 & 4.19) and a covering letter (Appendix II, 4.17) were mailed at three and six months postpartum with a reply paid envelope to facilitate easy return. Two weeks following the initial mail-out a telephone call was made to non-responders. If no telephone number was available a reminder postcard was sent. By making telephone contact at this time it was possible to find out whether:

- the survey had been received,
- the woman remained at the address and
- she planned to return the survey.

Four weeks following the initial mail-out a bright yellow reminder postcard was sent to the remaining non-responders (Appendix II, 4.21).

**4.2.6 Data processing**

*Rural recruitment centre:* Once a woman had entered the trial her consent form, entry details and entry survey were stored temporarily in a locked filing cabinet. Once a week a research assistant (on her way to a postgraduate course) from the rural hospital would personally deliver the completed forms to the Department of Public Health and Community Medicine (DPH&CM) for data processing.

*Metropolitan recruitment centre:* Following recruitment JG would return forms to the DPH&CM for data processing.
Dealing with the paper work: The trial produced vast amounts of paper work. Prior to recruitment commencing, protocols were developed to ensure smooth data management. A year planner was placed in a prominent location and critical dates were entered; such as when the first and last three month follow-up surveys were to be sent. In this way difficult times for follow-up such as Easter and Christmas and their impact on the timeline could be anticipated well in advance. Excel Spreadsheets were developed with columns for each critical step of follow-up (eg: Appendix II, 4.22). Coding schedules were developed for the entry, three and six month surveys. To ensure confidentiality a password known only to JG and PC (research assistant) was used to access the data base. Another password, known only to PC (to ensure JG remained blind to allocation), was used to access the randomisation procedure and schedule.

A suitable amount of secure, lockable storage space in a convenient location was found. Thank-you letters, surveys and reminder letters were coded and packaged by PC and JG in large batches and stored ready to be mailed at the appropriate times. The number of women recruited each day was recorded on the year planner. This helped with data management and provided information about the likelihood of recruiting the target sample size in the available time.

On return of completed forms the research assistant (PC) checked to make sure they were correctly labelled and complete. The completed consent form (Appendix II, 4.8) was then stored in a locked filing cabinet. The entry form (Appendix II, 4.10) details were then entered onto an Excel spreadsheet and the hard copy of the entry form was stored in a locked filing cabinet. On a weekly basis printouts of the Excel spreadsheet were made and stored in temporary spiral binding. The entry survey, three and six month survey were coded and entered onto an Excel spreadsheet by the research assistant as they were received and then checked by JG.
4.2.7 Analysis: Quantitative data

The analysis was undertaken using the ‘intention to treat principle’ by maintaining the women in their original group allocation whether or not they complied with their visit.

Statistical software: All data analysis was undertaken using SAS (SAS Institute Inc. 1988).

Ensuring accurate data entry: All data from the trial were entered onto computer by PC. As a check of accuracy a random sample of 10% of all the data were re-checked.

Data cleaning: Simple frequency counts were performed for every variable which formed a part of the analysis. In this way the coding used for each variable and the number of missing data were checked. Any errors were corrected at this stage. Items which dealt with similar areas were also compared as a consistency check. Out of range values were identified and re-checked. Once a satisfactory data set had been established analysis was carried out.

Interim analysis: An initial analysis was performed by PC using SAS (SAS Institute Inc. 1988) six months after recruitment had commenced using detailed instructions set out by JG. The aim was to analyse descriptive characteristics of the women to ensure that randomisation was successful. A sub-set analysis of the three month survey (to determine trends) was performed to detect any potentially harmful or definitely beneficial effects which would have caused a halt to the trial. The Peto stopping rule, which states that if a finding is significant at less than the 0.01 level the trial should be abandoned (Peto et al. 1976), was used for the interim analysis.

As recruitment was still underway results of the interim analysis were provided only to Professor Judith Lumley (supervisor) and Dr Jane Halliday (Director,
Perinatal Data Collection Unit. Melbourne, Australia). The recruitment personnel (JG, MW, JP, CG) were not informed of the outcome of the analysis, other than told that recruitment should continue in the same manner. This avoided potential biases in recruitment strategy as a result of being informed about the outcome of the analyses. Characteristics examined are listed in Table 4.1.

<table>
<thead>
<tr>
<th>Table 4.1: List of variables examined in Interim analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry variables</strong></td>
</tr>
<tr>
<td>Birth weight of baby</td>
</tr>
<tr>
<td>Maternal age</td>
</tr>
<tr>
<td>Number of children</td>
</tr>
<tr>
<td>Sex of baby</td>
</tr>
<tr>
<td>Model of antenatal care</td>
</tr>
<tr>
<td>Mode of delivery</td>
</tr>
<tr>
<td>Presence of episiotomy/tear</td>
</tr>
<tr>
<td>Breastfeeding status</td>
</tr>
<tr>
<td>Report a regular GP</td>
</tr>
<tr>
<td>Self-report of number of visits to GP</td>
</tr>
<tr>
<td>Marital status</td>
</tr>
<tr>
<td>English as a first language</td>
</tr>
<tr>
<td>Level of education</td>
</tr>
<tr>
<td>Number of cigarettes per day</td>
</tr>
<tr>
<td>Mother’s occupation</td>
</tr>
<tr>
<td>Father’s occupation</td>
</tr>
</tbody>
</table>

**Final analysis:** The final analysis was undertaken using SAS and followed the same procedure as that set down for the interim analysis. As the data collection relied upon women returning a postal questionnaire it was not possible to include information on women who did not respond. Hence, non-responders were not included in the final data set. Response rates to the three and six month surveys were higher for the rural centre leading to more rural responses than metropolitan responses in the final data set. To account for potential confounding an analysis of the major outcome measures was undertaken using
the Cochrane-Mantel-Haenzel test to adjust for hospital of recruitment (Daly et al. 1991). As this did not result in any significant changes to the findings, the Chi Square test results are presented.

**Analysis: Open-ended comments**

Women were asked to write comments about their postnatal check-up. Every survey was coded as to whether a woman had made a comment or not and this was entered along with the other variables onto the database. Following this a random sample of 10% of the surveys with written comments were read and re-read and a list was made of all the points mentioned. These points were then grouped together into themes. Using this list of themes all the surveys were read and the comments coded according to the list of themes.

4.2.8 Limitations of the trial

To increase the generalisability of the findings the trial was undertaken at one metropolitan hospital and one rural hospital. Comparison of the trial population of women to the overall Victorian population of women giving birth for the same time period was used to ascertain the generalisability of the findings.

The trial did not seek to provide information on private patients, women unable to read and write English, teenage mothers, mothers of premature, stillborn or seriously ill infants. It did seek to provide information on public hospital patients and women having normal vaginal and operative deliveries at 37 or more weeks gestation.

It was foreseen that women who were allocated to the standard care group might visit their GP earlier than six weeks. This might have been due to a problem arising or it might be that they initiated the visit because they were part of the trial. The Health Contacts Cards were used to determine the amount to which this occurred. It was considered inappropriate to instruct women in
the standard care group not to visit their GP in the first week home from hospital.

4.2.9 Ethical considerations

Ethics committee approval was granted from the University of Melbourne Human Research Ethics Committee, Preston and Northcote Community Hospital and Ballarat Base Hospital Ethics Committees.

The main ethical considerations for any clinical trial and those that were adhered to by the Postnatal Care Project were:

- informed written consent to participation and randomisation was obtained
- participants had the right to withdraw at any time
- the care provided was not influenced no matter what decision the person made about participation in the trial
- there was a genuine uncertainty about the benefits of the intervention to be studied; although it was unlikely to be harmful
- the trial design used an adequate sample size to answer the research question
- the results would be published in a way that did not allow identification of individual participants.

4.3 Results

4.3.1 Recruitment and response rates

Recruitment took place between February and December 1995. One thousand four hundred and seven women were approached: 1017 (72.3%) of these were eligible and asked to participate in the Postnatal Care Project. Six hundred and eighty-three women (67.2%) gave informed consent to participate. The response rate for the three month follow-up survey was 476/683 (69.7%) and for the six month follow-up survey 446/683 (65.3%). There were no significant differences in the response rates for the three (71.1% vs 68.3%, p=0.43) or six (66.7% vs 63.9%, p=0.45) month surveys between the standard care and intervention groups. Of the 334 women who declined to participate in the trial 328 agreed to complete the four-item non-participants survey. Figure 4.2 shows schematically what happened from the time of approach until the end of
follow-up six months postpartum for the women eligible to take part in the trial. There were differences in the recruitment and response rates for the two centres and hence they are reported separately. The Metropolitan recruitment and response rates are shown in Figure 4.3.

**Figure 4.2: Postnatal Care Project - overview**

1407 births

1017 eligible (72.3%)

Lost to follow-up 57 (8.3%)

Withdrawals 17 (2.5%)

683 participants (67.2%)

Three month survey 476 responses (69.7%)

Six month survey 446 responses (65.3%)
Figure 4.3 Metropolitan recruitment and response rates

1033 women giving birth

807 (78%) approached

505 Eligible

205 declined

300 (59.4%) gave informed consent

1 withdrew

17 lost to follow-up

282 received 3 month survey

4 withdrew

3 lost to follow-up

2 withdrew

5 lost to follow-up

200 returned 3 month survey

31 non-responders to 6 month survey

162 returned 6 month survey

14 returned 6 month survey

75 non-responders to 3 month survey

61 non-responders to 6 month survey

302 excluded:
107 emergency caesarean
134 unable to read English
37 babies in Special Care
7 Teenage Clinic Patients
7 early check-up with GP
6 Private patients
3 less than 37 weeks gestation
1 going overseas on discharge
Figure 4.4 Rural recruitment and response rates

827 women giving birth

600 (73%) approached

505 Eligible

129 declined

383 (75%) gave informed consent

19 lost to follow-up

5 withdrew

88 excluded:
50 Private patients
12 babies in Special Care
9 less than 37 weeks gestation
9 transferred to local hospital
3 Teenage Clinic Patients
2 unable to read English
1 baby stillborn

359 received 3 month survey

276 returned 3 month survey

250 returned 6 month survey

20 returned 6 month survey

72 non-responders to 3 month survey

52 non-responders to 6 month survey

4 withdrew

7 lost to follow-up

1 withdrew

6 lost to follow-up

19 non-responders to 6 month survey

105
Problems encountered along the way: Recruitment ran extremely smoothly and only minor problems were encountered. One research assistant recorded baby’s date of birth on the non-participants form instead of mother’s date of birth on six occasions. To deal with this the form was modified slightly; placing the word mother in bold capital letters. On a few occasions the mother was informed of the correct timing for her check-up but given the wrong date for this to occur (the date was for ten days after discharge rather than seven or for five weeks after birth rather than six). To prevent this from being repeated tables were compiled for the entire recruitment year giving check-up dates for every possible birth date and discharge date rather than using the calendar as had previously been the case.

After the first round of three month follow-up there was concern that some women were difficult to trace, and it was decided to record, for all women if possible, more than one contact phone number and address. This facilitated follow-up to some extent although many of the women who moved regularly gave contact numbers for other people who also moved regularly.

4.3.2 Demographic comparisons

To ensure that the randomisation procedure had been successful demographic characteristics of the standard care and intervention groups were compared. Table 4.2 shows that the groups were comparable on all characteristics.
Table 4.2: Demographic characteristics of participants; intervention vs standard care group

<table>
<thead>
<tr>
<th></th>
<th>Early visit</th>
<th>Standard care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=341</td>
<td>n=342</td>
</tr>
<tr>
<td></td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Mean age (years) (SD)</td>
<td>27.5 (5.3)</td>
<td>28.0 (5.2)</td>
</tr>
<tr>
<td>Primiparous</td>
<td>124 (36.5)</td>
<td>124 (36.3)</td>
</tr>
<tr>
<td>Infant birthweight (grams) (SD)</td>
<td>3439 (467.1)</td>
<td>3433 (459.2)</td>
</tr>
<tr>
<td>Type of delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>253 (74.2)</td>
<td>265 (77.5)</td>
</tr>
<tr>
<td>forceps/assisted</td>
<td>35 (10.3)</td>
<td>25 (7.3)</td>
</tr>
<tr>
<td>caesarean</td>
<td>53 (15.5)</td>
<td>52 (15.2)</td>
</tr>
<tr>
<td>Breastfeeding at recruitment</td>
<td>289 (84.8)</td>
<td>285 (83.6)</td>
</tr>
<tr>
<td>Have own GP</td>
<td>292 (85.6)</td>
<td>296 (86.6)</td>
</tr>
<tr>
<td>Antenatal care with a GP</td>
<td>197 (57.8)</td>
<td>207 (60.5)</td>
</tr>
<tr>
<td>English as first language</td>
<td>304 (89.2)</td>
<td>300 (87.7)</td>
</tr>
<tr>
<td>Married / living with partner</td>
<td>291 (85.4)</td>
<td>301 (88)</td>
</tr>
<tr>
<td>Occupation of woman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>home duties</td>
<td>107 (31.7)</td>
<td>103 (30.3)</td>
</tr>
<tr>
<td>professional</td>
<td>39 (11.6)</td>
<td>34 (10)</td>
</tr>
<tr>
<td>salesperson</td>
<td>102 (30.3)</td>
<td>131 (38.5)</td>
</tr>
<tr>
<td>factory worker</td>
<td>52 (15.4)</td>
<td>40 (11.8)</td>
</tr>
<tr>
<td>unemployed / pensioner</td>
<td>37 (11)</td>
<td>32 (7.4)</td>
</tr>
<tr>
<td>Partner with profession</td>
<td>58 (19.4)</td>
<td>62 (20.5)</td>
</tr>
</tbody>
</table>

To be able to comment on the generalisability of the trial outcomes it is important to be able to compare women who participated in the trial with women who chose not to take part. Non-participants were asked to complete a brief four item survey. Combining the data for the rural and the metropolitan hospitals revealed no statistically significant differences between participants and non-participants on any of the four items recorded: birthweight, maternal age, parity or mode of delivery. However, at the rural hospital a statistically significant difference was found in the mother's mean age: 27.6 (SD=5.1) for
participants and 26.2 (SD=5.3) for non-participants (p=0.02). However this age difference is not likely to be clinically significant.

In measuring outcomes for this trial it was possible to include data only from women who returned the postal surveys. Table 4.3 compares the demographic characteristics of women who returned surveys with women who did not.

**Table 4.3  Demographic characteristics of women who returned surveys vs those who did not.**

<table>
<thead>
<tr>
<th></th>
<th>Women returning surveys n=510 (%)</th>
<th>Women who did not return a survey n=173 (%)</th>
<th>Test of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years) (SD)</td>
<td>28.2 (5.1)</td>
<td>26.4 (5.4)</td>
<td>0.0002</td>
</tr>
<tr>
<td>Primiparous</td>
<td>192 (37.7)</td>
<td>56 (32.4)</td>
<td>ns</td>
</tr>
<tr>
<td>Infant birthweight (grams) (SD)</td>
<td>3436 (462.1)</td>
<td>3437 (466.2)</td>
<td>ns</td>
</tr>
<tr>
<td>Type of delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>377 (73.9)</td>
<td>141 (81.5)</td>
<td></td>
</tr>
<tr>
<td>forceps/assisted</td>
<td>48 (9.4)</td>
<td>12 (6.9)</td>
<td>ns</td>
</tr>
<tr>
<td>caesarean</td>
<td>85 (16.7)</td>
<td>20 (11.6)</td>
<td></td>
</tr>
<tr>
<td>Breastfeeding at recruitment</td>
<td>444 (87.2)</td>
<td>130 (75.1)</td>
<td>$X^2=13.7$, $df=1$, $p&lt;0.0001$</td>
</tr>
<tr>
<td>Have own GP</td>
<td>448 (87.8)</td>
<td>140 (80.9)</td>
<td>$X^2=5.2$, $df=1$, $p=0.02$</td>
</tr>
<tr>
<td>Antenatal care with a GP</td>
<td>315 (61.8)</td>
<td>89 (51.5)</td>
<td>$X^2=5.7$, $df=1$, $p=0.02$</td>
</tr>
<tr>
<td>English as first language</td>
<td>458 (89.8)</td>
<td>146 (84.4)</td>
<td>$X^2=3.7$, $df=1$, $p=0.05$</td>
</tr>
<tr>
<td>Married / living with partner</td>
<td>322 (63.1)</td>
<td>64 (36.9)</td>
<td>$X^2=35.9$, $df=1$, $p&lt;0.0001$</td>
</tr>
</tbody>
</table>

Seventeen (2.5%) women withdrew from the trial after giving informed consent to take part, 10 from the rural centre and 7 from the metropolitan centre. Ten of these women had been allocated an early check-up. The reasons for withdrawal were lack of time to complete surveys apart from one woman who was withdrawn as she suffered an acute psychosis requiring admission to hospital and another woman who withdrew as her husband had died suddenly.
4.3.3 The postnatal check-up

Women in the standard care group were more likely to report attending for their postnatal check-up at the scheduled time than women in the intervention group (88.4% vs 76.4%, $X^2 = 11.9$, df=1, $p=0.001$) when asked on the mail-out survey three months postpartum. Interestingly, women in the early check-up group were more likely to record their postnatal check-up visit on their Health Contacts Card (Appendix II, 4.15) than women in the standard care group. This is probably because of the attrition problems with diary keeping and many women may simply have forgotten to record their six week visit on the diary even though they remembered attending when asked directly on the mail-out survey. Also, from some of the written comments it appeared that some women did not write down their check-up visit as they considered this as different from other visits. Table 4.4 shows when women visited for their postnatal check-up according to the allocation to early visit or standard care group.
Table 4.4: Attendance at the postnatal check-up for women assigned to either the early visit or the standard care group

<table>
<thead>
<tr>
<th>Timing of check-up</th>
<th>Early visit</th>
<th>Standard care group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=233</td>
<td>n=243</td>
</tr>
<tr>
<td>early check-up</td>
<td>153 (65.7)</td>
<td>7 (2.9)</td>
</tr>
<tr>
<td>early check-up &amp; six week check-up</td>
<td>25 (10.7)</td>
<td>4 (1.7)</td>
</tr>
<tr>
<td>six week check-up only</td>
<td>36 (15.6)</td>
<td>210 (86.4)</td>
</tr>
<tr>
<td>check-up but not early or at 6 weeks</td>
<td>10 (4.3)</td>
<td>11 (4.5)</td>
</tr>
<tr>
<td>check-up, but not with a GP</td>
<td>0</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>no check-up</td>
<td>9 (3.9)</td>
<td>9 (3.7)</td>
</tr>
<tr>
<td>missing data</td>
<td>0</td>
<td>1 (0.4)</td>
</tr>
</tbody>
</table>

Eleven percent (25) of women in the intervention group, compared with only 2% (4) of women in the standard care group attended both an early and a six week check-up. In some cases these visits were ‘doctor-induced’, as these comments indicate, as the treating GP did not agree with the concept of an early check-up:

“Doctor didn’t believe in one week check-up so would not examine me at this appointment. He requested I see him at six weeks. At this second appointment he was quite thorough. (This happened despite the fact of me explaining the survey etc and giving him the relevant information supplied to me.)”

“My Dr did not seem very interested in this program and I felt like I was not well looked after. I did not have any physical examination...just told to come back at six weeks”

There were no significant differences between the groups in the sex of the GP seen for the check-up or the length of time the woman had been seeing that GP.
Examination at the check-up: Table 4.5 shows what examination took place at the check-up for the intervention and standard care groups.

Table 4.5: Examination at the postnatal check-up for early and standard care visits

<table>
<thead>
<tr>
<th></th>
<th>Early visit n=233 (%)</th>
<th>Standard care n=243 (%)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>urine test</td>
<td>24 (10.8)</td>
<td>25 (10.8)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>blood pressure</td>
<td>155 (69.8)</td>
<td>166 (71.6)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>weighed</td>
<td>46 (20.7)</td>
<td>56 (24.1)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>breast exam.</td>
<td>49 (22.1)</td>
<td>55 (23.7)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>vaginal exam.</td>
<td>52 (23.4)</td>
<td>87 (37.5)</td>
<td>10.6</td>
<td>0.001</td>
</tr>
<tr>
<td>stitches check</td>
<td>70 (31.5)</td>
<td>69 (29.7)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>pap smear</td>
<td>40 (18.0)</td>
<td>91 (39.2)</td>
<td>24.9</td>
<td>0.001</td>
</tr>
<tr>
<td>abdomen exam.</td>
<td>170 (76.6)</td>
<td>163 (70.3)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>blood test</td>
<td>17 (7.7)</td>
<td>14 (6.0)</td>
<td>ns</td>
<td></td>
</tr>
</tbody>
</table>

ns = not significant p>0.05; denominators may vary due to missing values.

Discussion at the check-up: Table 4.6 shows what topics were discussed at the postnatal check-up. Women in the intervention group were more likely to have a discussion about labour and birth than women in the standard care group. Discussion of sex and care in hospital was approaching significance (p=0.07) as shown in table 4.6.
Table 4.6: Discussion at the postnatal check-up

<table>
<thead>
<tr>
<th></th>
<th>Intervention (%) n=233</th>
<th>Standard care (%) n=243</th>
<th>X²</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>labour and birth</td>
<td>159 (75.4)</td>
<td>140 (63.4)</td>
<td>7.3</td>
<td>0.007</td>
</tr>
<tr>
<td>care in hospital</td>
<td>64 (31.4)</td>
<td>51 (23.5)</td>
<td>3.3</td>
<td>0.07</td>
</tr>
<tr>
<td>feeding the baby</td>
<td>184 (85.2)</td>
<td>181 (81.9)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>baby’s behaviour/crying/sleeping</td>
<td>164 (76.6)</td>
<td>165 (75)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>contraception</td>
<td>180 (83.3)</td>
<td>189 (84)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>physical problems</td>
<td>107 (51.2)</td>
<td>104 (47.5)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>my feelings</td>
<td>122 (57.6)</td>
<td>111 (51.2)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>help with housework</td>
<td>45 (22)</td>
<td>42 (19.5)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>help with baby</td>
<td>74 (35.8)</td>
<td>77 (35.5)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>relationships</td>
<td>53 (25.9)</td>
<td>51 (23.9)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>sex</td>
<td>63 (30.3)</td>
<td>84 (38.7)</td>
<td>3.3</td>
<td>0.07</td>
</tr>
<tr>
<td>diet</td>
<td>47 (22.6)</td>
<td>51 (23.6)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>exercise</td>
<td>69 (33.2)</td>
<td>83 (37.7)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>childcare</td>
<td>23 (11.2)</td>
<td>22 (10.2)</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>going back to work</td>
<td>26 (12.6)</td>
<td>19 (8.7)</td>
<td>ns</td>
<td></td>
</tr>
</tbody>
</table>

ns = not significant p>0.05, denominators may vary due to missing values.

Satisfaction with the check-up: There were no differences in satisfaction with the check-up between intervention and standard care groups (Table 4.7).

Table 4.7: Satisfaction with the postnatal check-up

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Intervention n=233</th>
<th>Standard care n=243</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>56 (25.4)</td>
<td>59 (25.6)</td>
<td>0.34</td>
</tr>
<tr>
<td>Good</td>
<td>91 (41.4)</td>
<td>101 (43.7)</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>56 (25.4)</td>
<td>48 (20.8)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>10 (4.6)</td>
<td>19 (8.2)</td>
<td></td>
</tr>
<tr>
<td>Very poor</td>
<td>7 (3.2)</td>
<td>4 (1.7)</td>
<td></td>
</tr>
</tbody>
</table>

Note: denominators vary due to missing data

Two open-ended questions about the check-up were included:

"Thinking about your check-up after leaving hospital, what were you
1) particularly happy about and 2) particularly unhappy about?"
There were no significant differences between the intervention and standard care groups as to the number of happy (65.5% vs 66.8%, p=0.76) or unhappy comments (37.7% vs 34.9%, p=0.54) made on the surveys.

The results of the thematic analysis undertaken with the comments is discussed in detail in Chapter 5. In this chapter it is important to look at the differences between the groups in the content of the comments. Women in the intervention group wrote more ‘happy’ comments about the GP’s manner (gentle, caring, friendly, 13 vs 6 comments) and the thoroughness of the baby check (16 vs 7 comments) than women in the standard care group; and less ‘happy’ comments about the thoroughness of the check-up in general (9 vs 16 comments). Women in the intervention group wrote more ‘unhappy’ comments about the fact that they did not have a vaginal examination (38 vs 18 comments), or that the visit was too soon (18 vs 0 comments). Eight women in the intervention group wrote that their visit was too soon as it was too early to allow a vaginal examination. Women in the standard care group wrote more often that they did not have any opportunity to talk or discuss issues at their check-up (15 vs 7 comments), that they felt rushed (9 vs 5 comments), the check-up was not thorough (5 vs 2 comments) and that they did not like having a vaginal examination at the check-up (5 vs 0 comments).

4.3.4 Short Form 36 - measuring health and well-being

There were no differences found between intervention and standard care groups on any of the domains of the SF 36 at three or six months after birth. Mean scores and standard deviations are given for intervention and standard care groups in Tables 4.8 and 4.9.
Table 4.8: SF36 scores for intervention and standard care groups at 3 months after birth

<table>
<thead>
<tr>
<th>Domain</th>
<th>Intervention n=233 (SD)</th>
<th>Standard care n=243 (SD)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical functioning</td>
<td>86.8 (17.8)</td>
<td>86.5 (16.3)</td>
<td>0.85</td>
</tr>
<tr>
<td>Role-physical</td>
<td>73.7 (35.7)</td>
<td>72.1 (36.1)</td>
<td>0.63</td>
</tr>
<tr>
<td>Bodily pain</td>
<td>77.8 (22.9)</td>
<td>75.9 (23.1)</td>
<td>0.39</td>
</tr>
<tr>
<td>General Health</td>
<td>74.4 (19.7)</td>
<td>74.6 (19.0)</td>
<td>0.93</td>
</tr>
<tr>
<td>Vitality</td>
<td>53.5 (20.1)</td>
<td>53.1 (22.3)</td>
<td>0.83</td>
</tr>
<tr>
<td>Social functioning</td>
<td>78.3 (24.0)</td>
<td>79.4 (21.9)</td>
<td>0.61</td>
</tr>
<tr>
<td>Role-emotional</td>
<td>76.2 (36.1)</td>
<td>74.3 (38.5)</td>
<td>0.57</td>
</tr>
<tr>
<td>Mental health</td>
<td>70.3 (19.7)</td>
<td>72.1 (18.1)</td>
<td>0.28</td>
</tr>
<tr>
<td>Reported health transition</td>
<td>3.06 (0.89)</td>
<td>3.04 (0.86)</td>
<td>0.8</td>
</tr>
</tbody>
</table>

NIV: denominators vary due to missing data

Table 4.9: SF36 scores for intervention and standard care groups at 6 months after birth

<table>
<thead>
<tr>
<th>Domain</th>
<th>Intervention n=218 (SD)</th>
<th>Standard care n=228 (SD)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical functioning</td>
<td>88.7 (16.4)</td>
<td>88.2 (17.0)</td>
<td>0.74</td>
</tr>
<tr>
<td>Role-physical</td>
<td>78.6 (32.9)</td>
<td>79.3 (32.7)</td>
<td>0.83</td>
</tr>
<tr>
<td>Bodily pain</td>
<td>79.9 (23.3)</td>
<td>77.9 (22.3)</td>
<td>0.36</td>
</tr>
<tr>
<td>General Health</td>
<td>76.1 (18.6)</td>
<td>76.3 (18.7)</td>
<td>0.91</td>
</tr>
<tr>
<td>Vitality</td>
<td>58.1 (21.3)</td>
<td>58.0 (22.6)</td>
<td>0.98</td>
</tr>
<tr>
<td>Social functioning</td>
<td>82.2 (23.6)</td>
<td>82.4 (21.7)</td>
<td>0.91</td>
</tr>
<tr>
<td>Role-emotional</td>
<td>80.5 (34.0)</td>
<td>80.3 (34.8)</td>
<td>0.94</td>
</tr>
<tr>
<td>Mental health</td>
<td>74.0 (18.5)</td>
<td>74.9 (18.0)</td>
<td>0.61</td>
</tr>
<tr>
<td>Reported health transition</td>
<td>2.88 (0.92)</td>
<td>2.86 (0.89)</td>
<td>0.80</td>
</tr>
</tbody>
</table>

NIV: denominators vary due to missing data
4.3.5 Edinburgh Postnatal Depression Scale (EPDS)

There were no differences between intervention and standard care groups in the percentage of women scoring as depressed (EPDS >12) at three (intervention=16.6% vs standard care=13.6%, X² = 0.8, df=1, p=0.37) or six (intervention=11.6% vs standard care=12.8%, X² =0.2, df=1, p=0.69) months postpartum. There were also no differences in the mean scores at three (intervention=7.38, sd=5.31 vs standard care=7.48, sd=5.35, p=0.85) or six (intervention=5.87, sd=5.37 vs standard care=6.08, sd=5.14, p=0.67) months after birth.

4.3.6 Problems encountered in the six months after birth

There were no differences in the numbers of problems encountered in the six months following birth between intervention and standard care groups (Table 4.10). Table 4.10 gives details for each problem listed in the three month survey and shows that women in the intervention group were more likely to report difficulties with low milk supply and adjusting to the demands of a new baby.
Table 4.10: Problems encountered in the three months following birth

<table>
<thead>
<tr>
<th>Problem</th>
<th>Intervention n=233 (%)</th>
<th>Standard care n=243 (%)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sore perineum</td>
<td>72 (31.0)</td>
<td>62 (25.5)</td>
<td>1.8</td>
<td>ns</td>
</tr>
<tr>
<td>caesarean wound pain</td>
<td>23 (9.9)</td>
<td>28 (11.5)</td>
<td>0.3</td>
<td>ns</td>
</tr>
<tr>
<td>urinary incontinence</td>
<td>20 (8.6)</td>
<td>17 (7.0)</td>
<td>0.4</td>
<td>ns</td>
</tr>
<tr>
<td>constipation / loss of standard care</td>
<td>45 (19.4)</td>
<td>47 (19.3)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>haemorrhoids</td>
<td>56 (24.1)</td>
<td>56 (23.1)</td>
<td>0.8</td>
<td>ns</td>
</tr>
<tr>
<td>tiredness &amp; exhaustion</td>
<td>131 (56.5)</td>
<td>123 (50.6)</td>
<td>1.6</td>
<td>ns</td>
</tr>
<tr>
<td>constipation / loss of standard care</td>
<td>45 (19.4)</td>
<td>47 (19.3)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>haemorrhoids</td>
<td>56 (24.1)</td>
<td>56 (23.1)</td>
<td>0.8</td>
<td>ns</td>
</tr>
<tr>
<td>tiredness &amp; exhaustion</td>
<td>131 (56.5)</td>
<td>123 (50.6)</td>
<td>1.6</td>
<td>ns</td>
</tr>
<tr>
<td>more coughs/colds/minor illnesses</td>
<td>35 (15.1)</td>
<td>25 (10.3)</td>
<td>2.5</td>
<td>ns</td>
</tr>
<tr>
<td>backache</td>
<td>95 (41)</td>
<td>103 (42.4)</td>
<td>0.1</td>
<td>ns</td>
</tr>
<tr>
<td>mastitis</td>
<td>27 (11.6)</td>
<td>38 (15.6)</td>
<td>1.6</td>
<td>ns</td>
</tr>
<tr>
<td>nipple pain</td>
<td>64 (27.6)</td>
<td>62 (25.5)</td>
<td>0.3</td>
<td>ns</td>
</tr>
<tr>
<td>perceived low milk supply</td>
<td>64 (27.6)</td>
<td>44 (18.1)</td>
<td>6.1</td>
<td>0.01</td>
</tr>
<tr>
<td>feeling depressed or very unhappy for</td>
<td>43 (18.5)</td>
<td>38 (15.6)</td>
<td>0.7</td>
<td>ns</td>
</tr>
<tr>
<td>more than a few days</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contraception</td>
<td>84 (36.2)</td>
<td>85 (35)</td>
<td>0.1</td>
<td>ns</td>
</tr>
<tr>
<td>sex</td>
<td>45 (19.4)</td>
<td>50 (20.6)</td>
<td>0.1</td>
<td>ns</td>
</tr>
<tr>
<td>relationship with partner</td>
<td>33 (14.2)</td>
<td>39 (16.1)</td>
<td>0.3</td>
<td>ns</td>
</tr>
<tr>
<td>losing weight</td>
<td>51 (22)</td>
<td>61 (25)</td>
<td>0.6</td>
<td>ns</td>
</tr>
<tr>
<td>adjusting to demands of new baby</td>
<td>61 (26.3)</td>
<td>41 (16.9)</td>
<td>6.3</td>
<td>0.01</td>
</tr>
</tbody>
</table>

N.B. denominators vary due to missing data

Table 4.11 shows that the differences detected in the three month survey were not evident at six months when women were asked to select problems they had encountered in the previous month.
### Table 4.11: Problems encountered in the month prior to the six month follow-up

<table>
<thead>
<tr>
<th>Problem</th>
<th>Intervention n=218 (%)</th>
<th>Standard care n=228 (%)</th>
<th>$X^2$</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sore perineum</td>
<td>12 (5.5)</td>
<td>12 (5.3)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>caesarean wound pain</td>
<td>2 (0.9)</td>
<td>5 (2.2)</td>
<td>1.2</td>
<td>ns</td>
</tr>
<tr>
<td>urinary incontinence</td>
<td>10 (4.6)</td>
<td>11 (4.9)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>constipation / loss of standard care</td>
<td>10 (4.6)</td>
<td>14 (6.2)</td>
<td>0.5</td>
<td>ns</td>
</tr>
<tr>
<td>haemorrhoids</td>
<td>13 (6)</td>
<td>20 (8.9)</td>
<td>1.3</td>
<td>ns</td>
</tr>
<tr>
<td>tiredness &amp; exhaustion</td>
<td>94 (43.3)</td>
<td>103 (45.6)</td>
<td>0.2</td>
<td>ns</td>
</tr>
<tr>
<td>more coughs/colds/minor illnesses</td>
<td>19 (8.8)</td>
<td>25 (11.1)</td>
<td>0.7</td>
<td>ns</td>
</tr>
<tr>
<td>backache</td>
<td>70 (32.3)</td>
<td>84 (37.2)</td>
<td>1.2</td>
<td>ns</td>
</tr>
<tr>
<td>mastitis</td>
<td>4 (1.8)</td>
<td>8 (3.5)</td>
<td>1.2</td>
<td>ns</td>
</tr>
<tr>
<td>nipple pain</td>
<td>5 (2.3)</td>
<td>11 (4.9)</td>
<td>2.1</td>
<td>ns</td>
</tr>
<tr>
<td>perceived low milk supply</td>
<td>14 (6.5)</td>
<td>15 (6.6)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>feeling depressed or very unhappy</td>
<td>22 (10.1)</td>
<td>21 (9.3)</td>
<td>0.1</td>
<td>ns</td>
</tr>
<tr>
<td>for more than a few days</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contraception</td>
<td>24 (11.1)</td>
<td>24 (10.6)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>sex</td>
<td>25 (11.5)</td>
<td>20 (8.9)</td>
<td>0.9</td>
<td>ns</td>
</tr>
<tr>
<td>relationship with partner</td>
<td>25 (11.5)</td>
<td>27 (12)</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td>losing weight</td>
<td>44 (20.3)</td>
<td>51 (22.6)</td>
<td>0.4</td>
<td>ns</td>
</tr>
<tr>
<td>adjusting to demands of other children</td>
<td>25 (11.5)</td>
<td>38 (16.8)</td>
<td>2.5</td>
<td>ns</td>
</tr>
<tr>
<td>adjusting to demands of new baby</td>
<td>19 (8.8)</td>
<td>22 (9.7)</td>
<td>0.1</td>
<td>ns</td>
</tr>
</tbody>
</table>

NB: denominators vary due to missing data
4.3.7 Breastfeeding rates

There were no differences in the breastfeeding rates between the two groups at three and six months (table 4.12). Survival analysis undertaken to look at the length of time spent breastfeeding (in weeks) showed no differences between the two groups (table 4.13).

Table 4.12: Breastfeeding status for intervention and standard care groups at 3 and 6 months after birth

<table>
<thead>
<tr>
<th></th>
<th>Intervention n=233 (%)</th>
<th>Standard care n=243 (%)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three months after birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully breastfeeding</td>
<td>106 (46.3)</td>
<td>124 (51.4)</td>
<td>2.58</td>
<td>0.28</td>
</tr>
<tr>
<td>Partial breastfeeding</td>
<td>11 (4.8)</td>
<td>6 (2.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottle-feeding</td>
<td>112 (48.9)</td>
<td>111 (46.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six months after birth</td>
<td>(n=218)</td>
<td>(n=228)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully breastfeeding</td>
<td>63 (29.3)</td>
<td>78 (34.5)</td>
<td>1.57</td>
<td>0.46</td>
</tr>
<tr>
<td>Partial breastfeeding</td>
<td>18 (8.4)</td>
<td>20 (8.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottle-feeding</td>
<td>134 (62.3)</td>
<td>128 (56.6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NB: denominators vary due to missing data

Table 4.13 Duration of breastfeeding for intervention and standard care groups: results of a survival analysis. (Includes partial and full breastfeeding)
4.3.8 Satisfaction with general practice care

Satisfaction with general practice care received in the six months following birth did not differ significantly between the two groups. Table 4.14 shows the results of a global rating of that care whilst table 4.15 shows results for particular aspects of general practice postnatal care. In analysing the particular aspects of postnatal care women were asked whether they agreed strongly/agreed/not sure/disagreed/disagreed strongly with an item. Measuring satisfaction with maternity care can be difficult as women tend to rate care highly on global scales whilst expressing dissatisfaction with particular aspects of care (Hill & Draper 1995). It was hypothesised that the change in timing of the check-up in the Postnatal Care Project might result in a better doctor-patient relationship for women in the intervention group as the changed timing brought doctor and patient together earlier in the postnatal period, which might serve to enhance the relationship. The statements included in the six month survey dealt with issues in care that had been found to be important in other studies such as doctors being willing to spend time, to listen, to give a sense of understanding, to explain things. Items were also included which asked women about their level of confidence in general practitioners to detect that they were depressed or that their baby was seriously ill. As women tend to rate maternity care highly women not rating an item highly indicates a potential area for improvement. For this reason all women selecting ‘agreed strongly’ were compared to the remainder of the women completing that item. There were no significant differences between the groups.

Table 4.14: Satisfaction with general practice care in the six months after birth

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Intervention n=218 (%)</th>
<th>Standard care n=228 (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>109 (50.7)</td>
<td>122 (53.7)</td>
<td>0.21</td>
</tr>
<tr>
<td>Good</td>
<td>75 (34.9)</td>
<td>75 (33)</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>31 (14.4)</td>
<td>26 (11.5)</td>
<td></td>
</tr>
<tr>
<td>Poor/very poor</td>
<td>0 (0)</td>
<td>4 (1.8)</td>
<td></td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values
Table 4.15: Satisfaction with care from general practitioners in the six months after birth: percentage of women who agreed strongly with statements about particular aspects of care

<table>
<thead>
<tr>
<th>Statement</th>
<th>Intervention n=218 (%)</th>
<th>Standard care n=228 (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can usually get to see a GP when I need to</td>
<td>104 (47.9)</td>
<td>128 (56.4)</td>
<td>ns</td>
</tr>
<tr>
<td>The GPs I see are willing to spend time with me</td>
<td>91 (42.1)</td>
<td>103 (45.2)</td>
<td>ns</td>
</tr>
<tr>
<td>The GPs I visit hardly ever listen to my concerns</td>
<td>101 (46.8)</td>
<td>105 (46.1)</td>
<td>ns</td>
</tr>
<tr>
<td>The GPs I visit understand the way I have been feeling since the birth</td>
<td>51 (23.9)</td>
<td>53 (23.5)</td>
<td>ns</td>
</tr>
<tr>
<td>When I visit the GP with my baby s/he always asks me how I am</td>
<td>83 (38.8)</td>
<td>89 (39.0)</td>
<td>ns</td>
</tr>
<tr>
<td>I am unhappy with the way that GPs explain things to me</td>
<td>83 (38.6)</td>
<td>95 (41.7)</td>
<td>ns</td>
</tr>
<tr>
<td>The GPs I visit are good at dealing with young babies</td>
<td>98 (45.6)</td>
<td>108 (47.4)</td>
<td>ns</td>
</tr>
<tr>
<td>I am confident that the GPs I see would know if I was feeling depressed</td>
<td>48 (22.3)</td>
<td>50 (21.9)</td>
<td>ns</td>
</tr>
<tr>
<td>I am confident that the GPs I see would know my baby had a serious illness</td>
<td>97 (44.9)</td>
<td>106 (46.5)</td>
<td>ns</td>
</tr>
</tbody>
</table>

* = orders reversed, number of women who disagree strongly with statement.

NB: denominators may vary due to missing values.
4.3.9 Health service utilisation in the six months following birth

Women were asked at three and six months who they had talked to about caring for their baby and/or about their own health. Women in the intervention group were more likely to have talked to a GP about caring for their baby and less likely to have talked to a hospital doctor about caring for their baby in the three months following birth than women in the standard care group (table 4.16). These differences were not evident at six months (table 4.18). Table 4.16 and table 4.17 show results from the three month survey and table 4.18 and table 4.19 show results for the six month survey.

Table 4.16: People talked to about caring for baby in the three months since birth

<table>
<thead>
<tr>
<th>Person</th>
<th>Intervention n=233 (%)</th>
<th>Standard care n=243 (%)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>maternal and child health nurse</td>
<td>217 (93.1)</td>
<td>225 (92.6)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>general practitioner</td>
<td>159 (68.2)</td>
<td>141 (58.0)</td>
<td>5.33</td>
<td>0.02</td>
</tr>
<tr>
<td>maternal and child health after hours phone service</td>
<td>33 (14.2)</td>
<td>39 (16.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>domiciliary midwife</td>
<td>87 (37.3)</td>
<td>105 (43.2)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital doctor</td>
<td>17 (7.3)</td>
<td>34 (14.0)</td>
<td>5.6</td>
<td>0.02</td>
</tr>
<tr>
<td>hospital midwife</td>
<td>21 (9.0)</td>
<td>32 (13.2)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>obstetrician</td>
<td>5 (2.15)</td>
<td>4 (1.7)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>paediatrician</td>
<td>27 (11.6)</td>
<td>30 (12.4)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>family and friends</td>
<td>187 (80.3)</td>
<td>180 (74.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Nursing Mothers’ Association</td>
<td>24 (10.3)</td>
<td>17 (7.0)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>others</td>
<td>16 (6.9)</td>
<td>9 (3.7)</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values
### Table 4.17: People talked to about own health in the three months since birth

<table>
<thead>
<tr>
<th>Person</th>
<th>Intervention n=233 (%)</th>
<th>Standard care n=243 (%)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>maternal and child health nurse</td>
<td>140 (60.9)</td>
<td>146 (60.3)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>general practitioner</td>
<td>149 (64.8)</td>
<td>152 (62.8)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>maternal and child health after hours</td>
<td>6 (2.6)</td>
<td>11 (4.6)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>phone service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>domiciliary midwife</td>
<td>53 (23.0)</td>
<td>52 (21.5)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital doctor</td>
<td>20 (8.7)</td>
<td>21 (8.7)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital midwife</td>
<td>17 (7.4)</td>
<td>14 (5.8)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>obstetrician</td>
<td>5 (2.2)</td>
<td>4 (1.7)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>paediatrician</td>
<td>4 (1.7)</td>
<td>1 (0.4)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>family and friends</td>
<td>143 (62.2)</td>
<td>133 (55.0)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Nursing Mothers' Association</td>
<td>5 (2.2)</td>
<td>10 (4.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>others</td>
<td>6 (2.6)</td>
<td>7 (2.9)</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values

### Table 4.18: People talked to about caring for baby in the month prior to the six month survey

<table>
<thead>
<tr>
<th>Person</th>
<th>Intervention n=218 (%)</th>
<th>Standard care n=228 (%)</th>
<th>X²</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>maternal and child health nurse</td>
<td>154 (70.6)</td>
<td>164 (71.9)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>general practitioner</td>
<td>92 (42.2)</td>
<td>87 (38.2)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>maternal and child health after hours</td>
<td>10 (4.6)</td>
<td>12 (5.3)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>phone service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>domiciliary midwife</td>
<td>4 (1.8)</td>
<td>7 (3.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital doctor</td>
<td>10 (4.6)</td>
<td>12 (5.3)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital midwife</td>
<td>4 (1.8)</td>
<td>6 (2.6)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>obstetrician</td>
<td>2 (0.9)</td>
<td>2 (0.9)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>paediatrician</td>
<td>9 (4.1)</td>
<td>10 (4.4)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>family and friends</td>
<td>142 (65.1)</td>
<td>135 (59.2)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Nursing Mothers' Association</td>
<td>6 (2.8)</td>
<td>7 (3.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>others</td>
<td>8 (3.7)</td>
<td>7 (3.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values

122
Table 4.19: People talked to about own health in the month prior to the six month survey

<table>
<thead>
<tr>
<th>Person</th>
<th>Intervention n=218 (%)</th>
<th>Standard care n=228 (%)</th>
<th>( \chi^2 )</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>maternal and child health nurse</td>
<td>42 (19.4)</td>
<td>35 (15.4)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>general practitioner</td>
<td>54 (24.9)</td>
<td>63 (27.8)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>maternal and child health after hours</td>
<td>2 (0.9)</td>
<td>2 (0.9)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>phone service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>domiciliary midwife</td>
<td>2 (0.9)</td>
<td>3 (1.3)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital doctor</td>
<td>5 (2.3)</td>
<td>4 (1.8)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>hospital midwife</td>
<td>2 (0.9)</td>
<td>1 (0.4)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>obstetrician</td>
<td>5 (2.3)</td>
<td>4 (0.9)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>paediatrician</td>
<td>1 (0.5)</td>
<td>1 (0.4)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>family and friends</td>
<td>72 (33.2)</td>
<td>70 (30.8)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Nursing Mothers' Association</td>
<td>3 (1.4)</td>
<td>2 (0.9)</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>others</td>
<td>4 (1.8)</td>
<td>7 (3.1)</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

NB: denominators may vary due to missing values

As well as including the above items in the mail-out surveys at three and six months postpartum women were asked to keep a brief record (Health Contacts Card, Appendix II, 4.15) of all the visits they made to health care professionals. It was anticipated that some women would complete these records very diligently and that other women would complete the records less diligently. However, it was anticipated that the degree of completeness of the Health Contacts Cards should not vary significantly between the intervention and standard care groups, as these groups had been established randomly, and thus some meaningful comparisons would be possible. There were no significant differences between the intervention and standard care groups as to completeness of the Health Contacts Cards and hence it is meaningful to compare the findings. There were no significant differences between the number of visits to a GP, Maternal and Child Health Nurse or other practitioners (specialists, alternative practitioners etc) in the first six weeks of life or in the period from six weeks to six months (Table 4.20). Having an early postnatal check-up did not increase or decrease the actual number of visits recorded by women on the Health Contacts Cards.
Table 4.20: Mean number of visits to health professionals in the first six weeks and six weeks to six months following childbirth for intervention and standard care groups, as recorded on Health Contacts Cards. (Does not include 'check-up' visit)

<table>
<thead>
<tr>
<th>Visit</th>
<th>Early visit group mean (95% CI)</th>
<th>Standard care group mean (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP visits &lt; 6 weeks</td>
<td>1.2 (0.9 - 1.4)</td>
<td>1.1 (0.9 - 1.3)</td>
<td>0.5</td>
</tr>
<tr>
<td>GP visits &gt;=6 weeks</td>
<td>2.9 (2.5 - 3.3)</td>
<td>2.4 (2.0 - 2.8)</td>
<td>0.1</td>
</tr>
<tr>
<td>MCHN visits &lt; 6 weeks</td>
<td>2.6 (2.3 - 2.8)</td>
<td>2.4 (2.2 - 2.7)</td>
<td>0.5</td>
</tr>
<tr>
<td>MCHN visits &gt;=6 weeks</td>
<td>3.8 (3.4 - 4.2)</td>
<td>3.4 (2.9 - 3.9)</td>
<td>0.2</td>
</tr>
<tr>
<td>Other visits &lt; 6 weeks</td>
<td>1.4 (1.1 - 1.8)</td>
<td>1.4 (1.1 - 1.7)</td>
<td>0.9</td>
</tr>
<tr>
<td>Other visits &gt;=6 weeks</td>
<td>2.1 (1.6 - 2.6)</td>
<td>1.9 (1.6 - 2.4)</td>
<td>0.7</td>
</tr>
</tbody>
</table>

4.3.10 Compliance with childhood immunisation schedule

It was possible that an early check-up could have a negative impact on immunisation rates. A six week check-up has the potential to serve as a reminder to women to bring their baby for immunisation. At six months women allocated an early check-up were as likely as women allocated a six week check-up to have a baby up to date with all immunisations (40.4% vs 44.3%, $X^2 = 0.7$, df=1, p=0.4).
4.4 Discussion

A change in the timing of the routine postnatal check-up was the focus of this study. The early check-up was scheduled to occur one week after discharge from hospital. This preceded the time, as shown by the analysis of Medicare data in Chapter 2, when many women begin to seek general practice advice about their own or their baby's health. The early check-up gave general practitioners the opportunity to meet the mother and her new baby early in the postnatal phase. There was opportunity to focus on all aspects of maternal and child health; physical, emotional and social. General practitioners were not given instructions or advice about what they should do at this check-up as the intervention was limited to changing the timing only. If effective, the early check-up was a simple, relatively cheap intervention that could be implemented on a wide scale without difficulty.

The trial was successfully implemented at both centres, reaching the required sample size within the timeframe proposed. Response rates to follow-up surveys were slightly lower than anticipated but gave enough power to test the pre-specified hypotheses.

The Postnatal Care Project was designed as a trial randomised by the individual, stratified by hospital of recruitment, with individual outcome measurements. This is a most simple randomised trial design and is not feasible for all general practice questions. The fact that most Australian women come together in maternity hospitals for the birth of their babies meant that many of the problems associated with recruitment in the general practice setting (Pringle & Churchill 1995) could be overcome.

There were no significant differences between standard care and intervention groups demonstrated on any of the major health outcomes studied. Women who were assigned to have an early check-up were as likely as women who were assigned a traditional check-up to cease breastfeeding before three months
and they were equal on scores on the SF36 and EPDS. There were some subtle differences between the groups and these are discussed below.

All women who returned a survey were sent feedback about the results of the trial (Appendix II, 4.23).

4.4.1 Recruitment and follow-up
Participation rates varied between the two recruitment centres with 75% of the rural women agreeing to take part compared with 59% of the metropolitan women. Response rates to the three and six month surveys were also higher for the rural centre. It is difficult to be sure about the reasons for these differences. It is possible that the recruitment strategies varied between the centres however JG trained all the recruitment staff using the same detailed written guidelines, visual prompts and information sheets. Women recruited at the metropolitan centre were less likely to be breastfeeding, less likely to have completed a year twelve education, more likely to be unemployed and less likely to have English as a first language. It is more likely that these demographic differences account for the difference in participation rates and survey return rates. In fact, it is this difference in demographic characteristics between the two centres that increases the generalisability of the findings of the study.

4.4.2 Limitations of the trial
The intervention for the trial was an appointment time for an early check-up with a GP. As informed consent was gained from all participants it is possible that women allocated to the standard care group may have benefited from their involvement as they were made aware of their GP early in the postnatal phase. They may have been given the message that to visit a GP early was potentially of benefit. This is different from usual care in which women are discharged from hospital with a letter to take to their GP six weeks later. There is no message that they should visit earlier. It may actually imply the reverse: you should be fine until six weeks. There is no way of knowing the magnitude or
direction of this effect on the results of the trial but the possibility that it masked a significant finding should be remembered.

The data were analysed using the ‘intention to treat’ principle; according to allocation to the early or traditional group and not on whether the woman attended the check-up at the scheduled time. Calculation of the required sample size for the trial was based on being able to detect a 15% increase in breastfeeding rates at six months which also allowed detection of clinically meaningful changes on the SF 36 questionnaire. Breastfeeding rates drop from 80% on leaving hospital to around 50% at three months (Lumley et al. 1990). An early postnatal check-up had the potential to identify women who were having feeding difficulties such as: painful nipples, perceived low milk supply, blocked ducts and poor attachment techniques. GPs had the opportunity to implement a management plan to overcome these difficulties thereby increasing the likelihood of continued breastfeeding.

The sample size obtained had 80% power (p = 0.05) to detect at least a 13% increase in breastfeeding from the six month mean of 35% (standard care group) and a shift in the mean score on the EPDS from 6.08 (standard care group, 6 month mean) to 4.6 and changes on the SF 36 of between 4.5 points for the physical functioning domain and 10 points for the role-emotional domain. A condition such as low back pain results in a score which is about 20 points lower than the general population on the physical functioning and role-emotional domains of the SF 36 (Garratt et al. 1993).

**4.4.4 Generalisability of findings**

The women who took part in the follow up of this trial were all public patients, able to read and write English who had given birth to a well baby. Single women, unemployed women and women with a first language other than English were less likely to participate and respond to surveys therefore the results must be interpreted with caution in relation to this group.
Compared to all women who gave birth in Victoria during the time period of the trial the participants were younger: 28.2% of the women returning surveys were less than 25 years compared with 19% of all Victorian women giving birth during 1995. The women returning surveys were more likely to give birth spontaneously (74%) than all Victorian women giving birth during 1995 (67.5%) (The Consultative Council on Obstetric and Paediatric Mortality and Morbidity 1996). These differences need to be considered when applying the results of this trial to the Victorian population of women giving birth.

4.4.5 The postnatal check-up

Attendance at the check-up: Ninety-six percent of women who returned a three month survey had attended a GP for a postnatal check-up. There is no published data on the postnatal check-up attendance rates for all Victorian women, however, a recent Victorian study found a similar rate of 97.5% (personal communication S. Brown, Life as a Mother Project. LaTrobe University, Melbourne). Comparison with this figure is complicated because women identified as depressed were oversampled for the study. Nevertheless, postnatal check-up rates appear to be high for Victorian women and similar findings have been reported in the UK (Bick & MacArthur 1995b; Bowers 1985).

Women in the intervention group were significantly less likely to attend for their postnatal check-up at the scheduled time than women in the standard care group. This may have been because they saw the check-up as ‘new’ and therefore not important or the timing may not have been practical for some women. Perhaps knowing about the project made women feel confident to decide their own timing for the check-up.

This trial is interesting in that it tests an intervention in general practice yet recruits women rather than GPs. As it was the timing of the check-up that formed the intervention it was most practical to allocate women to intervention or standard care group. It was not practical, nor part of the intervention, to
approach each GP personally in the two recruitment areas. The trial protocol
was presented at GP meetings in the two locations and these meetings were
well attended. As well, each GP received a letter outlining the details of the
project. In the main GPs were receptive and interested in the project and
played their part willingly.

However, there were some doctors who, as they did not agree with the concept
of an early check-up, asked women to return at six weeks for ‘usual care’. This
resulted in some women complaining about the care from their GP at this early
check-up. The Antenatal Care Project in the UK, which tested the effect of a
reduced number of antenatal visits compared with standard care, report a
similar finding of non-adherence to the assigned schedules by both women and
doctors (Sikorski et al. 1996). This effect is likely to be encountered when
testing any intervention in general practice and is part of the complexity of
undertaking pragmatic trials.

The decreased attendance rate at the early check-up suggests that this timing
may not be practical for some women. In general practice there is the option of
providing a home visit to women, although this is rarely the case at present
(Chapter 2). It would be worthwhile to consider a home-visit option in future
randomised trials of postnatal care in general practice.

Eighteen women commented on their surveys that the one week check was too
early. Eight stated this was because they were not able to have an internal
examination. Thirty-eight women allocated to the intervention group also
stated they were unhappy about not having a vaginal examination and only 9
women in the intervention group commented about the thoroughness of the
check-up in the ‘happy comments’ section. It is not possible to say whether
these women would have rated their early check-up differently if they knew
that an internal examination was not necessarily medically indicated and that
less than half the women attending a six week check-up had this examination.
This raises an important issue which appears to be confusing both GPs and
women. It appears that women are equating thoroughness of check-up with the performance of a vaginal examination.

Women attending an early check-up were less likely to have a vaginal examination or pap smear than women in the standard care group. Part of the rationale for trialing an early check-up was to provide a stimulus that might shift the focus of the check-up from a routine vaginal examination to an opportunity to spend time talking with a GP. This shift in focus has been recommended by a number of authors (Bick & MacArthur 1995a; Bick & MacArthur 1995b; Bowers 1985; Glazener et al. 1995; Glazener et al. 1993b) based on a study which showed that routine vaginal examinations provided little, if any, useful information (Sharif et al. 1993). The letter to the doctor at one week stated that a vaginal examination was not expected and should only occur if they felt it was medically indicated (Appendix II, 4.14). However, as discussed in Chapter 3, some general practitioners still place importance on the routine vaginal examination, as do some of the women in this study. These beliefs appear to have coloured the GP’s interpretation and the woman’s experience of the early check-up. The implication is that GPs might benefit from medical updates and practice guidelines for the content of the postnatal check-up and women would benefit from explanations about what is required at a postnatal check-up and why.

Characteristics of GPs seen for the check-up:
The survey of GPs reported in Chapter 3 showed that sex of GP plays a major role in determining the approach to the postnatal check-up. It was reassuring to find that randomisation had resulted in equal numbers of women visiting a female GP for the early as well as the traditional check-up.

Time to talk: The survey at three months asked women to select which topics they had discussed at their postnatal check-up. Of the fifteen topics included only one differed significantly between the groups. Women in the intervention group were significantly more likely to discuss labour and birth at their
postnatal check-up. It is not possible to determine the exact nature of the
discussion that took place. However, it has been shown that the opportunity to
talk can result in health gains for women (Holden et al. 1989). The fact that
women in the intervention group were more likely to discuss their birth
experience is not surprising considering their check-up was nearer the event.
This is a subtle, but potentially powerful, change in the nature of the postnatal
check-up. More information will be available about the power of discussing
one's birth experience when results are available from a randomised controlled
trial currently underway in Melbourne to determine the effect of 'de-briefing'
women who have had an assisted delivery (personal communication, L.
Donahue, LaTrobe University, Melbourne). The opportunity for this
discussion at the postnatal check-up needs to be studied to determine the nature
and outcome of such discussions occurring in this setting.

4.4.6 Using the SF 36
To my knowledge this is the first trial involving recent mothers to include the
SF36 as an outcome measure. The results of this trial show that the SF36 is
acceptable to the women who responded to the surveys. There was very little
missing data and, as expected, scores improved over time.

The scores obtained on each domain of the SF 36 for the intervention and the
standard care group are lower than the scores obtained for a population sample
of Australian women aged 25-34 (Stevenson 1995). Whilst some of this
finding may be due to the lower SES of women in this study it suggests that
women experience poorer health at three and six months after birth than
women of the same age who have not recently given birth. A population-based
study of recent mothers is needed to obtain the SF 36 scores for the various
socioeconomic strata.

4.4.7 Depression
The intervention used in this trial was not expected to result in large reductions
in the number of women who were depressed and the sample size required to
detect small differences in the number of women with depression is eight times the number of women recruited for this trial. Although it had sufficient power to detect clinically significant differences in the mean EPDS scores, no such differences were detected. From the findings of the GP survey and this trial it is apparent that GPs need access to well planned, practical, evidence based ways of reducing the number of women with depression in their practices.

### 4.4.8 Physical health

The early check-up provided the GP with the opportunity to identify issues such as back pain, haemorrhoids, perineal pain and discuss issues like resuming sexual intercourse, back care and seeking help for any physical problems that may occur. There were no differences in the number of problems reported by women in the three months following birth. However, women in the intervention group were more likely to report problems with low milk supply and adjusting to the demands of a new baby. These differences did not remain significant at six months. These differences are interesting as they are both issues that are particularly relevant to the early postnatal weeks and may have sorted themselves out by a six week check-up. Perhaps women in the intervention group had the opportunity to talk about these issues with their GP thus ‘legitimising’ the concern and making them more likely to recall it at the time of the three month survey. There is also the possibility that an early visit undermined women’s confidence by inferring they needed professional advice at an early stage. It is also possible that the GP gave inappropriate advice; such as advising supplementary feeding if milk supply was perceived to be a problem. A recent US survey about the management of common breastfeeding problems found that 10% of obstetricians would give inappropriate advice about the management of perceived low milk supply (Freed et al. 1995).

Whatever the reason for the differences between the groups the finding illustrates how interventions can result in differences not anticipated in the original study design. It also illustrates the reason why trial sample sizes
should be two-tailed ie: large enough to detect both improvement and deterioration due to the intervention.

4.4.9 Breastfeeding

It has been noted that there is a rapid decline in breastfeeding numbers in the early weeks after birth (Campbell 1996). The early postnatal check-up offered the GP a unique opportunity to improve the breastfeeding continuation rates within their practice. The most common reasons for cessation of breastfeeding are sore nipples and perceived low milk supply (Graffy 1992a). The Postnatal Care Project enabled women to attend their GP at a crucial time in the establishment of breastfeeding. GPs could have intervened at this stage to implement a management plan that might make a difference. They could have provided the mother with information about attachment of the baby at the breast (one of the commonest reasons for nipple pain and subsequent breastfeeding cessation), the basics of supply and demand and the need for confidence in the ability to breastfeed.

The lack of effect on breastfeeding found in this trial reflects the difficulties encountered when trying to improve breastfeeding continuance rates (Redman et al. 1995). Recent studies suggest that medical practitioners need to improve their knowledge and skills at dealing with breastfeeding problems (Freed et al. 1995; Goldstein & Freed 1993). GPs need access to reliable, practical information about breastfeeding and associated problems as well as easy access to support networks for mothers experiencing difficulties. Interventions aimed at increasing GPs knowledge about and management of common breastfeeding problems needs to be developed and tested using randomised controlled trials.

4.4.10 Satisfaction with general practice care

There were no significant differences between the groups in terms of satisfaction with general practice care. A detailed discussion of satisfaction with care at the postnatal check-up is included in Chapter 5.
4.4.11 Health service utilisation

The intervention resulted in a change in the use of health services in the three months after birth. Women in the intervention group were more likely to talk to a GP about their baby’s health than women in the standard care group and less likely to talk to a hospital doctor. There was no impact on visits to the maternal and child health nurse or other health professionals during this time. This finding suggests that women allocated an early visit developed more of a community focus in seeking health care for their baby (but not for themselves) than women in the standard care group who were inclined to seek hospital care. It is interesting to note that there were no differences found in analysis of visits recorded by women on the Health Contacts Card. Even though women in the early visit group were more likely to talk to a GP about their baby’s health it does not appear that this caused an increase in the number of visits to a general practitioner. It must be noted that the information gained from the Health Contacts Cards about the actual number of visits to health professionals is an underestimate. Many women did not record all their visits and hence the information from the cards has been used only in a comparative way.

4.5 Conclusions

The Postnatal Care Project was a randomised controlled trial of an early postnatal check-up. It was successfully undertaken and allows the following conclusions.

1. Changing only the timing of the postnatal check-up is not likely to result in changes in breastfeeding rates, physical problems or depression after birth.

2. An early postnatal check-up resulted in a shift in focus from routine pelvic examination to more discussion about labour and birth and did not result in worse health outcomes for women.

3. Some women may find an early check-up difficult to attend and this raises the issue of the possibility, practicality and acceptability of home visits to women by their general practitioner in the early postnatal period.
4. It is possible to use a randomised controlled trial design to evaluate postnatal care.

5. Interventions which address the content of the postnatal check-up should be developed and evaluated as randomised controlled trials.

This trial shows that it would be premature and ineffective to introduce a routine early postnatal check-up. It does show however that an early check-up causes a change in focus of the check-up, in the direction that has been recommended; from examination to more time to talk. It also shows that the content of the postnatal check-up is in need of review. It appears that the exact timing of the check-up is less important than the content of the check-up. Future studies need to address this issue.
CHAPTER FIVE
MEETING MOTHERS’ NEEDS - THE POSTNATAL CHECK-UP IN GENERAL PRACTICE

CONTENTS

5.1 Background
5.2 Method
5.3 Results
  5.3.1 Characteristics of women
  5.3.2 The postnatal check-up
  5.3.3 Problems after birth
  5.3.4 Satisfaction with check-up
5.4 Discussion
  5.4.1 Current six week check-up
  5.4.2 Problems after birth
  5.4.3 The ideal GP
5.5 Conclusions

Background

Women and their babies have many visits to the GP in first six months of life (Gunn et al. 1996). A number of authors have suggested that postnatal care needs reassessment (Bick & MacArthur 1995a; Bick & MacArthur 1995b; Bowers 1985; Glazener et al. 1993b; Noble 1993; Sharif et al. 1993; Smith 1987). Drife has called for more data about postnatal care and postnatal morbidity to be available to inform decisions about health care for women giving birth (Drife 1995). This chapter provides data for Australian women receiving a standard six-week postnatal check-up.
Aims
To determine
• the extent to which the current postnatal check-up is meeting mothers’ needs
and
• to identify gaps in the current postnatal check-up which can be used to inform
the recommendations for future postnatal care in general practice.

Data obtained from the GP survey are contrasted with data obtained from the
standard care group of women in the Postnatal Care Project; as they provide a
large cohort of women receiving standard care, that is, given an appointment date
for a routine check-up six weeks after childbirth.

5.3 Method
The methods used in the survey of GPs and the randomised trial of an early
postnatal check-up have been described in detail in Chapters 3 and 4. To
undertake the analysis presented here data collected from the GP survey were
compared with data collected by postal survey from the women in the standard
care group of the trial at three months postpartum. Only items common to both
studies are reported.

As female GPs were oversampled in the survey of GPs reported in Chapter 3 the
results presented have been re-weighted to account for this; assuming that 24% of
Victorian GPs were female at the time of the survey (personal communication, Ms
Barbara Toohey, Professional Review Division, Health Insurance Commission).

5.3 Results

5.3.1 Characteristics of the women in the standard care group
Two hundred and forty-three of the women in the standard care group of the trial
returned a survey at three months postpartum. It must be borne in mind that these
women agreed to participate in a randomised trial and returned a three month
survey which introduces a selection bias. As reported in Chapter 4 women who
returned surveys differed from women who did not return surveys. Women who did not return surveys were younger, more likely to have had antenatal care provided by the hospital antenatal clinic rather than shared care, less likely to be breastfeeding at recruitment, less likely to have a regular GP, more likely to be single, less likely to have English as a first language, less likely to have completed year 12 or have tertiary training, more likely to smoke, more likely to be unemployed and/or to have an unemployed partner. All these differences were significant (p<0.05) and should be borne in mind when interpreting the findings.

The main focus of this discussion is to make comparisons between what GPs (as a group) recommend and what postnatal women (as a group) report. It is not to comment on individual women or individual GPs. The aim of making these comparisons is to identify areas where there is a mismatch between GPs' beliefs and mothers' reports to enable suggestions for improvement. It is not intended to provide information on prevalence rates per se.

5.3.2 The postnatal check-up

Of the 243 standard care group women returning a survey at three months postpartum, 210 (86.4%) had attended their scheduled six week postnatal check-up and it is the data from these women that are presented in relation to the postnatal check-up. Four women (1.7%) had attended a one week post discharge check-up, as well as their six week check-up, and their data is not presented here. Table 5.1 shows the percentage of women who reported a particular examination taking place at the six week check-up compared with the percentage of GPs who believed such an examination should take place routinely.
Table 5.1: Examination at the postnatal check-up: what women report vs what GPs recommend

<table>
<thead>
<tr>
<th>Examination reported by women at six week check</th>
<th>Number of GPs who believe it should be routine</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=208&lt;sup&gt;a&lt;/sup&gt;</td>
<td>n=715&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>urine test</td>
<td></td>
</tr>
<tr>
<td>22 (10.5)</td>
<td>351 (49.7)</td>
</tr>
<tr>
<td>blood pressure</td>
<td></td>
</tr>
<tr>
<td>149 (71.6)</td>
<td>634 (88.9)</td>
</tr>
<tr>
<td>weighed</td>
<td></td>
</tr>
<tr>
<td>49 (23.6)</td>
<td>403 (56.5)</td>
</tr>
<tr>
<td>breast exam.</td>
<td></td>
</tr>
<tr>
<td>49 (23.6)</td>
<td>425 (59.6)</td>
</tr>
<tr>
<td>vaginal exam.</td>
<td></td>
</tr>
<tr>
<td>81 (38.9)</td>
<td>526 (73.9)</td>
</tr>
<tr>
<td>stitches check</td>
<td></td>
</tr>
<tr>
<td>62 (29.8)</td>
<td>576 (80.7)</td>
</tr>
<tr>
<td>cervical smear</td>
<td></td>
</tr>
<tr>
<td>84 (40.4)</td>
<td>275 (39.0)</td>
</tr>
<tr>
<td>abdomen exam.</td>
<td></td>
</tr>
<tr>
<td>146 (70.2)</td>
<td>639 (89.8)</td>
</tr>
</tbody>
</table>

<sup>a</sup>missing data from 2 women. <sup>b</sup>weighted data presented to account for oversampling of female GPs, denominators may differ due to missing data.

Table 5.2 shows the percentage of women who reported a particular discussion taking place at the six week check-up compared with the percentage of GPs who believed such a discussion should take place routinely.

Table 5.2: Discussion at the postnatal check-up: what women report vs what GPs recommend

<table>
<thead>
<tr>
<th>Number of women discussing issue at six week check</th>
<th>% of GPs who believe it should be routine</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 208&lt;sup&gt;a&lt;/sup&gt;</td>
<td>n=715&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>labour and birth</td>
<td>524 (74.4)</td>
</tr>
<tr>
<td>care in hospital</td>
<td>329 (47.5)</td>
</tr>
<tr>
<td>feeding the baby</td>
<td>699 (98.3)</td>
</tr>
<tr>
<td>baby’s behaviour/crying/sleeping</td>
<td>536 (76.3)</td>
</tr>
<tr>
<td>contraception</td>
<td>690 (97.1)</td>
</tr>
<tr>
<td>maternal feelings</td>
<td>589 (83.5)</td>
</tr>
<tr>
<td>help with housework</td>
<td>226 (32.4)</td>
</tr>
<tr>
<td>relationships</td>
<td>315 (44.7)</td>
</tr>
<tr>
<td>sex</td>
<td>332 (46.9)</td>
</tr>
<tr>
<td>diet</td>
<td>432 (61.1)</td>
</tr>
<tr>
<td>exercise</td>
<td>404 (57.2)</td>
</tr>
<tr>
<td>childcare</td>
<td>201 (29.0)</td>
</tr>
<tr>
<td>going back to work</td>
<td>184 (26.1)</td>
</tr>
</tbody>
</table>

<sup>a</sup>missing data from 7 to 16 women for some variables. <sup>b</sup>weighted data presented to account for oversampling of female GPs, denominators may differ due to missing data.
Problems encountered in the three months following birth

Table 5.3 lists the problems encountered, by women in the standard care group, in the three months following birth, the number of women who sought help for the problem from a GP and the number of women seeking help from a GP who rated that help as ‘very helpful’.

Table 5.3: Problems encountered in the three months following birth, the number of women seeking help from a GP and the number rating that as ‘very helpful’

<table>
<thead>
<tr>
<th>Problem</th>
<th>Number of standard care group with problem n=242 (%)</th>
<th>Number of women with problem who sought help from GP (%)</th>
<th>Number of women seeking GP help who found GP ‘very helpful’ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tiredness &amp; exhaustion</td>
<td>122 (50.4)</td>
<td>56 (45.9)</td>
<td>20 (35.7)</td>
</tr>
<tr>
<td>backache</td>
<td>102 (42.2)</td>
<td>34 (33.3)</td>
<td>18 (52.9)</td>
</tr>
<tr>
<td>contraception</td>
<td>85 (35.1)</td>
<td>74 (87.1)</td>
<td>56 (75.7)</td>
</tr>
<tr>
<td>sore perineum</td>
<td>62 (25.6)</td>
<td>40 (64.5)</td>
<td>23 (57.5)</td>
</tr>
<tr>
<td>nipple pain</td>
<td>61 (25.2)</td>
<td>32 (52.5)</td>
<td>22 (68.8)</td>
</tr>
<tr>
<td>haemorrhoids</td>
<td>56 (23.1)</td>
<td>24 (42.9)</td>
<td>13 (54.2)</td>
</tr>
<tr>
<td>sex</td>
<td>(20.6)</td>
<td>(48.0)</td>
<td>(45.8)</td>
</tr>
<tr>
<td>perceived low milk supply</td>
<td>43 (17.8)</td>
<td>24 (55.8)</td>
<td>15 (62.5)</td>
</tr>
<tr>
<td>relationship with partner</td>
<td>39 (16.1)</td>
<td>19 (48.7)</td>
<td>10 (52.6)</td>
</tr>
<tr>
<td>mastitis</td>
<td>38 (15.7)</td>
<td>33 (86.8)</td>
<td>26 (78.8)</td>
</tr>
<tr>
<td>feeling depressed or very unhappy for more than a few days</td>
<td>37 (15.3)</td>
<td>22 (59.5)</td>
<td>13 (59.0)</td>
</tr>
<tr>
<td>caesarean wound pain</td>
<td>28 (11.5)</td>
<td>23 (82.6)</td>
<td>11 (47.8)</td>
</tr>
<tr>
<td>urinary incontinence</td>
<td>17 (7.0)</td>
<td>11 (64.7)</td>
<td>2 (18.2)</td>
</tr>
</tbody>
</table>

The results presented in Table 5.3 are presented graphically in Figure 5.1. In Figure 5.1 it is assumed that 100 women have each problem. The number of women likely to seek help from a GP and the number rating that care as ‘very helpful’ have been calculated using the findings in Table 5.3. For example; if 100 women had a contraceptive problem or concern, 87 would seek help from a GP and 66 would find the GP ‘very helpful’. However, of 100 women with urinary incontinence only 65 would seek help from a GP and only 12 would find the GP
‘very helpful’. For each problem the percentage of GPs ‘very confident’ to deal with the problem is also shown.

Figure 5.1 illustrates that for many common postnatal problems fewer than half the women with the problem are likely to seek help. It also shows that it is uncommon for more than half the women seeking help to find the GP ‘very helpful’. Less than a quarter of the women found the GP helpful in dealing with urinary incontinence, haemorrhoids, tiredness, backache, sexual and relationship issues. For all but three (haemorrhoids, mastitis and contraception) of the common postnatal problems presented in Figure 5.1 fewer than half of the GPs feel ‘very confident’ to deal with the problem. For mastitis and contraception, where more than 70% of GPs reported feeling ‘very confident’ to deal with the issue more than 60% of women were likely to find the GP ‘very helpful’.
Figure 5.1: Problems encountered in the three months after birth: if 100 women experienced the problem how many would seek GP help, how many would find it 'very helpful' compared with the % of GPs 'very confident' to deal with the problem?
5.3.4 Satisfaction with the six week postnatal check-up

Table 5.4 shows how women rated their six week check-up on a 5 point Likert global rating scale. If one considers that anything other than ‘very good’ indicates a qualified response then overall rates of satisfaction are low. As well, thirty two percent of women rated their check-up as mixed, poor or very poor which indicates a high level of dissatisfaction with the current postnatal check-up in general practice.

Table 5.4: Women’s description of their six week postnatal check-up

<table>
<thead>
<tr>
<th>On balance how would you describe your check-up?</th>
<th>Women attending a six week check-up n=207 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>55 (26.6)</td>
</tr>
<tr>
<td>Good</td>
<td>87 (42.0)</td>
</tr>
<tr>
<td>Mixed</td>
<td>44 (21.3)</td>
</tr>
<tr>
<td>Poor</td>
<td>18 (8.7)</td>
</tr>
<tr>
<td>Very poor</td>
<td>3 (1.5)</td>
</tr>
</tbody>
</table>

Women were also asked two open-ended questions about their postnatal check-up:

"Thinking about your check-up after leaving hospital, what were you 1) particularly happy about? and 2) particularly unhappy about?"

One hundred and fifty-five women (66.8%) wrote comments about what they were particularly happy about and 81 (34.9%) wrote comments about what they were particularly unhappy about. The themes emerging from the ‘happy comments’ are shown in Table 5.5 along with the number of women making comments about that theme. The themes emerging from the ‘unhappy comments’ are shown in Table 5.6 along with the number of women making comments about that theme.
Table 5.5  The six week postnatal check-up: what women are particularly happy about

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of women making similar comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>happy to talk / discuss</td>
<td>20</td>
</tr>
<tr>
<td>felt comfortable</td>
<td>15</td>
</tr>
<tr>
<td>genuine concern</td>
<td>12</td>
</tr>
<tr>
<td>gives time</td>
<td>8</td>
</tr>
<tr>
<td>understanding</td>
<td>6</td>
</tr>
<tr>
<td>supportive</td>
<td>6</td>
</tr>
<tr>
<td>asks about feelings</td>
<td>5</td>
</tr>
<tr>
<td>caring</td>
<td>4</td>
</tr>
<tr>
<td>gentle</td>
<td>2</td>
</tr>
<tr>
<td>listens</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>n=155</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical health</strong></td>
<td></td>
</tr>
<tr>
<td>reassuring</td>
<td>41</td>
</tr>
<tr>
<td>(that everything was OK)</td>
<td></td>
</tr>
<tr>
<td>thorough</td>
<td>16</td>
</tr>
<tr>
<td>thorough baby check</td>
<td>7</td>
</tr>
<tr>
<td>pelvic examination done</td>
<td>6</td>
</tr>
<tr>
<td>no pelvic examination done</td>
<td>3</td>
</tr>
<tr>
<td>detected problem</td>
<td>3</td>
</tr>
<tr>
<td>health issue</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Information</strong></td>
<td></td>
</tr>
<tr>
<td>good explanation / advice</td>
<td>10</td>
</tr>
<tr>
<td>helpful information</td>
<td>5</td>
</tr>
<tr>
<td>answered questions</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Practical issues</strong></td>
<td></td>
</tr>
<tr>
<td>liked timing of visit</td>
<td>3</td>
</tr>
<tr>
<td>availability</td>
<td>2</td>
</tr>
<tr>
<td>good to see female doctor</td>
<td>1</td>
</tr>
</tbody>
</table>

By examining what women write about their check-up it is possible to get an idea about what is most important to women. One hundred and fifty-five women made 181 ‘happy’ comments about their postnatal check-up. By far women were particularly happy if their doctor exhibited good communication skills and
reassured the woman about her own and her baby’s health. Seventy-nine comments (44%) were made about the communication style of the doctor, for example:

‘My GP asked lots of questions about how I was feeling and coping and was very caring.’

‘Am particularly comfortable with my GP and was able to talk about the labour and get a sympathetic ear, was able to express fears and anxieties re: cot death...’

‘I have a very caring doctor who takes time to find out about not only the physical side but the emotional side of having a child.’

‘The kind gentle way my doctor handles everything. You can go in sad and come out over the moon.’

Seventy-nine (44%) comments were made about the physical side of the postnatal check-up. Forty-one women (23%) commented about the reassuring nature of their postnatal check-up:

‘reassuring to know things were healing well and physically that I was getting back to normal.’

‘to know everything was alright’

‘told me my scar was healing really well and that my daughter is fit and well even though she is so small’

‘to know the things that were happening were normal’

‘I was happy there were no problems with my baby’
Table 5.6: The six week postnatal check-up: what women are particularly unhappy about

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of women making similar comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>no discussion</td>
<td>15</td>
</tr>
<tr>
<td>too rushed</td>
<td>9</td>
</tr>
<tr>
<td>showed no concern</td>
<td>8</td>
</tr>
<tr>
<td><strong>Physical health</strong></td>
<td></td>
</tr>
<tr>
<td>no examination</td>
<td>18</td>
</tr>
<tr>
<td>how health problem dealt with</td>
<td>10</td>
</tr>
<tr>
<td>not thorough</td>
<td>5</td>
</tr>
<tr>
<td>didn’t like pelvic examination</td>
<td>5</td>
</tr>
<tr>
<td><strong>Information</strong></td>
<td></td>
</tr>
<tr>
<td>gave wrong advice</td>
<td>1</td>
</tr>
<tr>
<td><strong>Practical issues</strong></td>
<td></td>
</tr>
<tr>
<td>long wait to be seen</td>
<td>4</td>
</tr>
<tr>
<td>waste of time</td>
<td>4</td>
</tr>
<tr>
<td>not usual doctor</td>
<td>2</td>
</tr>
<tr>
<td>six weeks too late</td>
<td>2</td>
</tr>
<tr>
<td>male GP</td>
<td>1</td>
</tr>
</tbody>
</table>

Eighty-one women wrote 84 comments about what they were particularly unhappy about in relation to their six week postnatal check-up. Once again it was comments about communication and physical health that women made most often. Fifteen (18%) of the comments were complaints about the lack of discussion that took place:

'I wasn’t asked about how the birth went or how I was feeling emotionally’

'No chance to discuss the emotional impact of having a new baby, the effects of sleep deprivation etc as GP too busy’

'unable to discuss emotional issues’

'not being asked about how I was coping or whether I had any concerns’
The comments also gave more information about women’s expectations of the physical examination at the postnatal check-up. Eighteen women (21%) complained about the lack of physical examination their doctor provided:

‘the doctor just checked my scar and blood pressure but not my baby’

‘...he didn’t do a pap smear or vaginal examination to check my tear had healed’

‘I thought a pap smear was always done after birth?’

‘She told me a vaginal examination is not necessary just she (sic) verbally asked about my feelings’

Nine women complained about the way health problems were dealt with by their doctor:

‘no indepth discussion about contraception’

‘didn’t concentrate on my health at the time’

‘maybe a swab (should be done) as I had vaginal soreness at the time that had not resolved with canesten’

Some women made comments about feeling rushed and the doctor not showing enough concern about their problems:

‘I had to really express my concern about the severe pain in my tail bone before he ordered X-Rays!’

‘doctor was a bit dismissive of pain from stitches- would a female doctor have the same opinion’ (sic)

‘my health seemed unimportant (having stomach cramps)’
5.4 Discussion

The data presented in this Chapter indicate a high level of dissatisfaction with the current postnatal check-up; 31.5% of women rated their check-up as ‘mixed, poor or very poor’. Only a quarter of women rated their check-up as ‘very good’ this is in stark contrast to the 70% of Victorian women who rated private GP antenatal care as ‘very good’ and the 32.5% who rated shared antenatal care as ‘very good’ (Laslett et al. 1997). In fact postnatal care and shared antenatal care are not rated highly by women. This is particularly concerning as global questions about care tend to illicit positive responses. Indeed, it is not uncommon for patient surveys to report 80% or more people being satisfied (on global rating scales) with the care they receive (Carr-Hill 1992); as people tend to accept the notion of ‘what is, must be best’ (Porter & MacIntyre 1984). Indeed, it has been suggested that dissatisfaction ratings of more than 10% should be interpreted as priority areas for improvement (Andrzejewski & Lagua 1997).

The findings of this study and the Laslett et al study (1997) have serious implications for general practice maternity care as GPs provide most of the shared care in Victoria and they provided all the postnatal check-ups reported in this chapter. However, dissatisfaction with postnatal care has been reported in other studies; Bowers (1985) reported that 29% of women stated that their postnatal check-up did not meet their expectations of wanting a less hurried examination and more discussion. Cranfield (1983) reported 50% of women being satisfied with general practice postnatal care compared with more than 80% satisfied with care from midwives and child health nurses. At eight weeks postpartum Glazener et al (1993) report 9% of women rating postnatal care as ‘mixed or poor’, at twelve to eighteen months 22% of women rate their care as ‘mixed or poor’. Smith’s (1996) survey of maternity care in Bath (atypical for its high proportion of non-consultant led care) reported that 25% of women have mixed feelings about their postnatal care from their GP compared with only 6% having mixed feelings about their antenatal care from the GP.
Many women are dissatisfied with the postnatal care they receive from their GP, especially the routine postnatal check-up. It is likely that some of this dissatisfaction is related to what takes place at the check-up.

5.4.1 What is happening at the current six week check-up?

In this study more than two thirds of the women attending a six week check-up had their blood pressure measured, their abdomen examined and some discussion about their labour and birth experience, feeding their baby, baby’s behaviour and contraception. Around a third of women had a vaginal examination, a cervical smear and/or a perineal check. Less than a quarter of women had a breast examination, were weighed or had their urine tested. In Chapter 3 the postnatal examination was discussed in detail and it would not seem to be problematic that so few women had these latter examinations. However, it is not possible to say whether these examinations were done because of a problem or whether they were undertaken simply as a ‘routine’.

Most women are having their blood pressure taken and their abdomen examined despite the fact that, in the asymptomatic, normotensive woman, this is not likely to yield any useful information. It takes up valuable time that could be better spent on other issues.

The data presented indicate that GPs are not doing what they believe they should be doing; this is a complex issue. GPs have been taught the standard approach to the routine postnatal check in medical school. The pelvic examination has been seen as essential to good postnatal care. Whilst on the one hand 74% of GPs believe it is good practice to perform a vaginal examination, only 37.5% of the women in this study reported having a vaginal examination at their postnatal check-up. This is much less than reported in a recent UK study where 70% of women had a vaginal examination (Bick & MacArthur 1995b).

It has been established that women are reliable informants about what has taken place during medical care (Cartwright 1987; Martin 1987) and so this finding
points out a discrepancy between what GPs believe should be done and what they actually do. It could be that GPs stated that it should be done as this is what they believe the ‘medically acceptable’ answer to be. The fact that not many of them actually practise this belief could be because it has yielded them little useful information and takes up time. Perhaps the comments volunteered by two GPs at the end of the survey provide insight into the ‘real’ situation in general practice:

“I don’t think that women welcome “routine internal examination” therefore I do these postnatally / preferably only for definite indications. I believe that this practice increases my chance of detecting relevant abnormalities.”

“I have often asked gynaecologists why we do “routine” vaginal examinations as it would seem to me that if there is no pain or abnormal bleeding and no dyspareunia, then I am most unlikely to find any abnormality...”

The recent research literature would agree with these GPs. Bowers (1985) found no benefit of routine vaginal examination when surveying postnatal women about their check-up and the study by Sharif and Clarke (1993) designed to address the issue supported the previous study. The study by Sharif and Clarke (1993) was a well conducted audit of hospital records and it is unlikely that their findings would not be repeated in a subsequent study. However their study did not take account of the views of women.

This study shows that some women believe a vaginal examination is very important. The most frequent ‘happy’ comment about the postnatal check-up was that it was reassuring. Sometimes women wrote this in regard to their baby’s health sometimes in relation to their own physical check-up. This finding suggests that some women gain reassurance from the doctor examining their perineal wound and checking their uterus. It is not possible to say whether this is because they believe it is medically indicated. A study exploring women’s beliefs about the postnatal vaginal examination should be undertaken. Such a study would provide information for doctors about the best way to decide about whether a vaginal examination is indicated or not, taking into account medical indications and women’s beliefs. Guidelines for vaginal examination and management of abnormal findings in the postpartum need to be designed using
evidence based research (where possible) with input from women and medical practitioners.

Just over a third of women are having a cervical smear at the check-up. The recent UK study by Bick and MacArthur found that only 7.5% of women had a cervical smear taken even though 70% of them had a vaginal examinations. There can be a case made using the argument of opportunistic screening to undertake a cervical smear at the postnatal check-up. As discussed in Chapter 3 it is best to avoid taking cervical smears in the early postnatal months if at all possible. It would appear that a reasonable approach would be to only take a cervical smear if medically indicated or if the woman was due for a cervical smear and unlikely to return at three months postpartum, although it should be explained to the woman that this is not the best time to take the cervical smear. The comments from women show that many believe it is important to have a cervical smear after childbirth. This is an interesting belief considering the origins of the postnatal check-up and the belief that cervical trauma due to childbirth caused cancer, as discussed in Chapter 1. There is a need to educate women and GPs about the indications for cervical smears in the postnatal period.

Whilst GPs recognise it is important to discuss issues like maternal feelings, only half the women in this study reported discussing their feelings with the GP at the check-up. Few women discuss relationship issues, sex, childcare, help with housework and going back to work. Considering that 10-20% of women will experience depression in the year after birth, discussion of these issues could help the GP identify women in need of support. The open-ended comments give rich information about how important it is to women to be able to talk and to feel they are being listened to. There were some women who wrote glowing comments about their GP. It is the challenge for general practice to increase the number of women reporting these experiences.
5.4.2 Problems after birth

The common problems encountered by women in the three months after birth were tiredness, backache, contraception issues, perineal pain, nipple pain, haemorrhoids, sexual issues, low milk supply, relationship issues, mastitis, depression, wound pain after caesarean and urinary incontinence. These are similar problems to those found in a 1993 Australian, population-based, survey of recent mothers six to seven months after birth (Brown & Lumley in press).

Whilst two thirds of GPs feel ‘very confident’ to deal with contraception, mastitis and haemorrhoids, fewer than half feel ‘very confident’ to deal with the other common problems listed above. Women in this study were reluctant to seek help, as found in other studies (Bick & MacArthur 1995a; Glazener et al. 1995).

The comparison of the number of women seeking help, the number finding the GP ‘very helpful’ and the percentage of GPs confident to deal with the problem (figure 5.1) raises some interesting issues. Around half the women experiencing perineal pain, caesarean wound pain, urinary incontinence, mastitis, nipple pain, depression and contraceptive problems will seek OP help. Two thirds will find the GP ‘very helpful’ with mastitis, contraceptive issues and nipple pain yet fewer than half the women will find the GP ‘very helpful’ with the other common postnatal concerns.

Contraception and mastitis are both problems for which a prescription is often issued; for oral contraceptives in the case of contraception and antibiotics in the case of mastitis. It is interesting that two thirds of women found the GP ‘very helpful’ with these problems. One might conclude that the prescription was the reason. However, more than 70% of GPs stated they were ‘very confident’ to deal with these two problems, which may have impacted on the woman’s experience of the consultation. The issue is complicated further by the finding that mastitis is often managed poorly by medical practitioners (Inch & Fisher 1995). Most doctors prescribe antibiotics for women with symptoms of mastitis; failing to differentiate between inflammatory and infective mastitis and the need for
adequate drainage of the breast to treat and prevent mastitis (Inch & Fisher 1995). It may be the anti-inflammatory action of the antibiotic which leads to improvement, thus explaining why women find such management ‘very helpful’ (Inch & Fisher 1995). There is scope for more research in the prevention and management of mastitis; a condition which will be a problem for 17% of women in the six to seven months after birth (Brown & Lumley in press).

The complexity of these issues can be further demonstrated by the problem of nipple pain. Two thirds of women found the GP to be ‘very helpful’ with the problem of nipple pain even though less than half the GPs stated they were ‘very confident’ dealing with the problem. There is no obvious prescription in this case, although some GPs may have suggested creams, despite the lack of evidence for their effectiveness (Herd & Feeney 1986). Perhaps, in the case of nipple pain, it was therapeutic to have the problem acknowledged and to talk about it.

It is not possible, from the data collected for this study, to explore fully these hypotheses. However, it raises many issues about the complex interaction between a GP’s confidence to deal with a problem, the actual management of the problem and the way a woman rates care for that problem. Future studies are required which look in detail at common postnatal problems and their management in general practice.

5.5 Conclusions

These findings indicate that:

• many women are dissatisfied with their postnatal check-up
• the current postnatal check-up is not focussed on the common postnatal problems
• many women experience problems after birth
• many women will not seek help for these problems
• when women do seek help they will often consult their general practitioner
• for many problems for which women consult their GP they will not find the GP ‘very helpful’
• GPs could be better prepared to deal with the common postnatal problems

The failure of general practice to deal well with the common postnatal problems must be addressed if maternal health is to improve. This thesis has identified key areas for concern and can go some way towards discussing solutions. Firstly, the current postnatal check-up needs to be re-orientated to focus on the common postnatal problems encountered by women. Secondly, initiatives need to be undertaken to inform GPs about the common problems and how to best manage them; using an evidence-based approach. Thirdly, GPs need to be encouraged and trained to facilitate disclosure of postnatal problems, as women are reluctant to seek help. To implement these initiatives will require attention to the structural barriers that inhibit GPs from providing quality care; lack of time and incentive (Howe 1996).

This thesis has focussed on the role of the GP. However, it will require more than well-trained and motivated GPs to improve maternal health. Women need to be made aware of the possibility of treatment of conditions for which many are not seeking help. The reasons for the current, concerning levels of maternal morbidity need to be addressed. There is a need to implement forms of care which have been shown to be of benefit and to continue research into forms of care which may prevent postnatal morbidity.
CHAPTER SIX

THE FUTURE OF POSTNATAL CARE IN GENERAL PRACTICE

This thesis has examined the role of the general practitioner in postnatal care, with particular emphasis on the routine postnatal check-up.

Analysis of aggregated Medicare data from a random sample of 650 Victorian babies (born between March 1st 1993 and May 31st 1993) and their mothers showed that, on average, mothers and their babies visit GPs about 8 times in the six months after birth. Many women visit their GP around the time of the traditional six week check-up.

A Statewide survey of 1104 Victorian general practitioners was undertaken to gain input from GPs about their role at the postnatal check-up and showed that most general practitioners (~90%) were involved in postnatal care.

The survey revealed that the current postnatal check-up is not likely to target the common postnatal problems, as:

- there is an over emphasis on the routine pelvic examination,
- there is an under emphasis on discussion of emotional and social issues,
- the common postnatal physical problems, including sexual issues, are being overlooked, and
- many GPs lack confidence to deal with the common postnatal problems.

To determine whether some of these problems could be solved by giving GPs the opportunity to be involved in routine postnatal care earlier in the postnatal phase the Postnatal Care Project was undertaken. The Postnatal Care Project was a randomised trial which tested the effect of shifting the timing of the routine postnatal check-up to one week after hospital discharge, rather than six weeks after birth, in an effort to shift the focus of the check-up from routine
examination to indicated examination and more time to talk.

Whilst the Postnatal Care Project found that an early check-up resulted in a slight change of focus in the routine check-up, to allow more discussion and less routine examination, it did not improve maternal health. The introduction of an early postnatal check-up did not adversely effect the rates of baby immunisation or result in an increase in the number of visits to GPs in the six months after birth.

To explore further the postnatal check-up, the survey data were compared with data from the standard care group of the Postnatal Care Project. This comparison confirmed the findings of the GP survey and showed that the common problems were not being targeted at the six week check-up and, even when seeking help from a GP, many women were not finding the GP ‘very helpful’.

Comparison of the survey and standard care group data also revealed positive and negative aspects of the consultation from the woman’s point of view. Women liked the GP to exhibit well developed communication skills; being able to establish rapport, listen attentively, give feedback and reassurance. Women also appreciated GPs who had an organised practice that had short waiting times and plenty of time for the consultation. Women were unhappy if the GP was rushed and exhibited poor communication skills. These findings are not limited to recent mothers. A recent UK study found that the length of time spent with a patient is associated with the level of patient satisfaction (Baker 1996).

Many Australian general practices book a new patient every ten to fifteen minutes. Considering the complexity of the postnatal check-up it is likely that the GP will spend more than the booked time with the woman or will cut the consultation short, resulting in patient dissatisfaction. This issue is discussed below.
Lack of time is often cited as a reason for not being able to deal with complex areas, such as psychological distress (Howe 1996). Whilst lack of time is likely to be contributing to the levels of dissatisfaction, reported in this thesis; it is not the only factor. Lack of knowledge about and confidence to deal with common postnatal problems is of major importance.

The data presented in this thesis raise many concerns about the current content of the routine postnatal check-up in general practice. The postnatal check-up can no longer be equated with a thorough pelvic examination; to do so will miss many opportunities to deal with common, disabling postnatal problems.

If maternal health is to improve GPs will need to change the way they conduct routine postnatal care, in particular the routine postnatal check-up. To change GP behaviour is difficult; but not impossible. In a systematic review of randomised controlled trials 80% of multi-faceted educational interventions were found to have positive outcomes (including health care outcomes) compared with 64% of two-method interventions and 60% of single interventions, although only two studies out of the 89 single intervention studies reviewed effected changes in health care outcomes (Davis et al. 1995). Distribution of clinical guidelines alone has not been found to be effective in changing physicians’ practices (Greco & Eisenberg 1993).

To change the way that GPs provide postnatal care requires a multi-faceted intervention. Such an intervention should consist of a variety of strategies (three or more) which have been shown to be effective in educational interventions such as; reminders, patient mediated interventions, practice reinforcing strategies, peer discussion, practice rehearsal/role playing, communication skills practice, academic detailing and advice from opinion leaders (Davis & Fox 1994).

Interventions developed to improve postnatal care will be expensive and time
consuming and should be tested as randomised controlled trials to measure their effect on changing general practitioners knowledge, as well as their effect on health outcomes of recent mothers. What follows is a suggested approach to postnatal care in general practice. Ideally, this approach should be implemented using a multi-faceted educational intervention as part of a randomised controlled trial. The full development of the intervention should include input from recent mothers, general practitioners, researchers involved in maternity care, midwives, obstetricians, maternal and child health nurses and policy-makers. The importance of the latter statement cannot be over emphasised.

A new postnatal check-up

The postnatal check-up is a complex consultation, which if it is to be valuable, requires the GP to adopt a patient-centred approach (McWhinney 1989). To provide a postnatal check-up able to target the common postnatal problems these issues need to be addressed:

- structural issues
- communication skills
- evidence-based guidelines

Structural issues

Discharge planning from hospital needs to take account of the fact that GPs are very involved in the care of mothers and babies in the six months after birth. Every woman should be encouraged to nominate a GP who she is likely to visit. In the randomised trial, reported in Chapter 4, 86% of women were able to identify an individual GP or a clinic they usually attended. This GP or clinic should be notified when the woman is discharged from hospital.

Future studies to determine the most appropriate way of notifying GPs when a mother is discharged from hospital and ways of encouraging GPs, midwives and maternal and child health nurses to work together more effectively should be undertaken. The randomised trial presented in Chapter 4 of this thesis shows
that a shift in timing of the check-up is unlikely to make improvements in maternal health. For this reason it would appear most appropriate to maintain the traditional timing for the routine postnatal check-up of around six weeks after birth.

To be able to conduct a satisfactory postnatal check-up GPs need to allocate and book adequate time for the consultation. It would appear that 20 to 30 minutes are required to carry out a consultation of this complexity. Although, this consultation is only a beginning and it may take some time to cover all aspects of postnatal care for some women. The GP should feel able to ask the woman to come for review if there is not enough time at the first consultation.

There are issues to be considered about having the baby present at the consultation. Ideally, it would be desirable to observe the mother-baby interaction and conduct the routine baby-check at the same consultation. Therefore, the baby should be allocated a separate appointment time. To give the mother an opportunity to discuss issues without demands from her baby a relative or friend should accompany her to the check-up, to care for the baby if needed.

Some of these structural changes will be relatively easy to implement. For example, a GP can advise reception staff to allocate a double-appointment for all postnatal check-ups and a separate appointment for a baby-check. This will require reception staff asking women if they are attending for a postnatal check-up and if they intend to bring their baby with them. Women could be encouraged to bring another adult with them, if possible. Whilst there will be some problems implementing this change, it is feasible within current general practice arrangements. Planning for the postnatal check-up will be easier if the GP is involved in antenatal care.

Other changes will be more difficult. GP’s have complained for many years of inadequate notice of discharge after birth (Fleissig et al. 1997; Halloran et al. 159.
Perhaps Divisions of General Practice will bring about this change, as they work with hospitals to implement better discharge planning.

Communication skills
At various points in this thesis communication skills have been mentioned. Good communication skills are essential to good medical practice (Cassell 1995). Postnatal care provides an opportunity and a challenge for GPs to use good communication skills as postnatal care covers physical, emotional and social health at a crucial life stage (Christie et al. 1984).

GPs must be able to quickly establish rapport and put a woman at ease. In order to facilitate disclosure of problems the GP needs to listen attentively, be non-judgemental and use open-ended questions (McWhinney 1989). These skills can be taught (Gask 1992; Gerard et al. 1993). Whilst some of the GPs providing care to women in the trial exhibited these skills, many require training in their use.

An educational intervention to improve postnatal care would need to provide GPs with the opportunity to improve their communication skills. In particular, it should provide GPs with the opportunity to learn from recognised experts (both generalist and specialist) and to practise using these communication skills in a ‘safe’ environment (ie: with a simulated or role-playing patient) with constructive feedback, as this has been shown to be effective in improving skills (Davis & Fox 1994; Davis et al. 1995).

Evidence based guidelines
At the postnatal check-up the GP should use open-ended and focussed questions to take a detailed history. In particular, the GP should focus on areas of concern to the mother by active listening and following up on cues, as this approach is likely to cover the most relevant issues first. However, the GP should ensure that all women are asked about the common postnatal problems of tiredness, backache, contraception issues, perineal pain, nipple pain,
haemorrhoids, sexual issues, breastfeeding issues, relationship issues, mastitis, depression, wound pain after caesarean, vaginal bleeding, urinary incontinence and the level of social support. It may be useful for the GP to have access to a ‘check-up guide’ to ensure that all the common problems are covered. If such a guide were developed it would be important that it was used to serve as a ‘reminder strategy’ only and not as a ‘checklist approach’ to history-taking. If the list could be incorporated into the patient history it would remind the GP about areas to ask about at the next visit if there was not enough time to pursue them at the check-up.

Women who participate in a shared care program (currently around 10% of Victorian women) are given their own patient-held record. It would be useful if this record routinely contained a section for the postnatal check-up.

Figure 6.1 is a working example of the kind of reminder strategy that may be useful for the postnatal check-up. Rather than use a simple list of the areas to be covered Figure 6.1 uses interconnecting circles. This approach is suggested as it gives the GP the visual prompt that all the problems may be interconnected and leads the GP away from taking a ‘checklist’ approach. It is simply a reminder strategy and would need to be implemented as part of an educational intervention. Ideally, it would come as a ‘sticker’ which could be peeled off and stuck permanently into the patient history. GPs would be encouraged to mark off areas covered or circle areas they should return to at another visit.

There are many other possibilities for an educational intervention to improve the postnatal check-up. For example:

- providing GPs with the opportunity to improve their communication skills,
- giving GPs the opportunity to practise using the reminder strategy presented in Figure 6.1 with a simulated patient,
- providing seminars and workshops about the common postnatal problems,
- providing written information.
It is likely that a variety of strategies will be required to meet the differing learning needs of individual GPs.

**Figure 6.1  A Guide to the Postnatal Check-up**

An examination should be undertaken if the history indicates it is needed. This approach will need to be explained to women as some women expect an examination at the postnatal check-up. Indeed, if a woman requests an examination, despite the GP believing it is unnecessary, it should be done as some women will benefit from this reassurance.

It may be useful for a GP to have access to an information kit for mothers. This could be given to mothers at the end of the check-up consultation. As well as providing additional information it could encourage women to report any concerns to their doctor. It is important that such packages use evidence-
based information (where possible) and are subject to a rigorous evaluation.

Guidelines for the management of problems identified at the postnatal check-up should be developed with attention to the process for guideline development recommended by the National Health and Medical Research Council (Quality of Care and Health Outcomes Committee 1995). The developed guidelines, in conjunction with communication skills training and structural changes, should form part of a multi-faceted intervention to improve postnatal care. The developed intervention should be tested within a randomised trial.
BIBLIOGRAPHY


Howe, A. 1996. "I know what to do, but it's not possible to do it" - general practitioners' perceptions of their ability to detect psychological distress. *Family Practice* **13**, 127-32.


183


19th August 1994

Dear Doctor,

I am a general practitioner who needs your help.

Your name has been selected from your local Division of General Practice to be involved in this project. Enclosed with this letter you will find a survey. This survey has been sent to a sample of general practitioners throughout Victorian Divisions. We realise that many requests are made on general practitioners time but believe that you have much to offer in clarifying the role of the general practitioner in postnatal care.

The postnatal role of the general practitioner has never been clearly defined despite the fact that many mothers and their babies visit their general practitioner in the early postnatal weeks. Many recent policy changes (early discharge, domiciliary nursing, changes to Maternal and Child Health Services) have the potential to impact on the general practitioners’ postnatal role. However, General Practitioners are rarely consulted about postnatal care. **It is most important that a clear postnatal role is defined for the GP to ensure continuing involvement in this important area of general practice.**

I would be most grateful if you would complete the questionnaire and return it in the reply paid envelope as soon as possible.

The return of a completed questionnaire will entitle you to 3 Practice Assessment points. If you wish to be involved in this Practice Assessment Activity please complete the details on Page 14.

This project is part of my research towards a PhD (funded by the General Practice Evaluation Program) and supervised by Associate Professor Doris Young and Dr Judith Lumley. It has been approved by the Human Research Ethics Committee at the University of Melbourne. All we ask of you is to complete the questionnaire and return it to us. **Your identity will remain confidential.** Your questionnaire has been given a code number for follow up purposes only. This will enable us to contact those who do not return their questionnaire.

If you do not wish to be involved in this study we would appreciate if you would return the blank questionnaire to us. This will prevent you from receiving further mail outs of the questionnaire.

If you have any queries regarding this survey please contact me on 03-344-7276 (BH) or 03-859-3291 (AH).

Your participation in this survey will be most appreciated.

Yours sincerely,

Dr Jane Gunn  
GPEP Scholar  
Department of Public Health and Community Medicine

---

**University Logo**
Thank you for taking time to be involved in this survey.

This survey is designed to seek information about the care that general practitioners provide to women and their babies following childbirth i.e postnatal care. We are interested in the care that you provide at the routine postnatal check up ('six weeks check') as well as any other care that you may provide to mothers or their babies in the early weeks/months following childbirth.

It will take about 20 minutes to complete the questionnaire.

Please complete this questionnaire even if you rarely / never provide postnatal care; we are still very interested in your views.

Your confidentiality will be maintained.

Return of a completed survey will entitle you to 3 Practice Assessment Points, however you must remember to complete the details on page 14.

Dr Jane Gunn
Research Scholar
Department Public Health & Community Medicine
University of Melbourne

Dr Judith Lumley
Director
Centre for the Study of Mothers' and Children's Health
Monash University

Dr Doris Young
Associate Professor
Department Public Health & Community Medicine
University of Melbourne

Appendix 1, 3.2
Section A

The following items relate to your involvement with obstetric and postnatal care. Place a tick in the box which indicates your answer.

1. How many women would you see for a 'routine' postnatal review / six week check in an average year?
   - none
   - < 5
   - 5 - 10 women
   - 11 - 20 women
   - > 20

2. How often would you see a woman and/or her baby within the 6 weeks following birth (do not include the six week check or routine postnatal check)?
   - nearly always
   - very often
   - often
   - occasionally
   - almost never

3. Are you involved in providing shared obstetric care as part of a formal Shared Care Program with a Maternity Hospital? (if no go to no. 6)
   - Yes
   - No

4. How many women did you provide shared care for in the past year in a formal Shared Care Program?
   - not applicable
   - < 5 women
   - 5 - 10 women
   - 11 - 20 women
   - > 20 women

5. How many visits to you would the average shared care patient have during her pregnancy?
   - < 3
   - 3 - 5
   - 6 - 10
   - 11 - 15
   - >15

6. Are you involved in obstetric care where you also deliver the baby? (if no go to section B)
   - Yes
   - No

7. How many deliveries did you perform within the last 12 months? _____

8. On average how many times during pregnancy would a woman for whom you were going to provide intrapartum care (deliver baby) visit you?
   - 3 - 5
   - 6 - 10
   - 11 - 15
   - >15
**Section B: Examination of a recent mother.**

Please indicate what you believe **SHOULD** take place during the examination performed at a routine postnatal review / six week check.

Place a tick in one box for each item listed.

<table>
<thead>
<tr>
<th>1. check BP</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2. check urine</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2</td>
<td>3</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3. take a pap smear</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
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<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4. vaginal examination</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>5. assess pelvic floor muscle tone</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
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<thead>
<tr>
<th>6. check weight</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>7. examine breasts</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
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<tr>
<td>1</td>
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<td>2</td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>8. examine perineum</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
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<td>1</td>
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<table>
<thead>
<tr>
<th>9. examine abdomen</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
</tr>
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<td>3</td>
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<table>
<thead>
<tr>
<th>10. other: please list</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if you ticked sometimes.</th>
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<td>1</td>
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</tbody>
</table>
**Section C: Examination of an infant.**

Please indicate what you believe **SHOULD** take place during the examination performed at a routine postnatal review / six week check.

Place a tick in one box for each item listed.

<table>
<thead>
<tr>
<th></th>
<th>NEARLY ALWAYS</th>
<th>SOME-TIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if ticked sometimes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>weigh baby</td>
<td></td>
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<tr>
<td>2</td>
<td>measure length</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>measure head circumference</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>examine heart</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>examine eyes</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>examine hearing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>examine hips</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>examine umbilicus</td>
<td></td>
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<tr>
<td>9</td>
<td>examine genitalia</td>
<td></td>
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<tr>
<td>10</td>
<td>examine reflexes</td>
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<td>11</td>
<td>examine fontanelles</td>
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<tr>
<td>12</td>
<td>examine spine</td>
<td></td>
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<tr>
<td>13</td>
<td>examine appearance</td>
<td></td>
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<tr>
<td>14</td>
<td>assess development</td>
<td></td>
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<tr>
<td>15</td>
<td>Other: please list</td>
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</tbody>
</table>
Section D: Discussion at the six week check

A number of possible items for discussion are listed below. Please indicate the areas that you believe **SHOULD be discussed** at the routine postnatal review / six week check.

Place a tick in one column for each item listed.

<table>
<thead>
<tr>
<th>Item</th>
<th>NEARLY ALWAYS</th>
<th>SOMETIMES</th>
<th>RARELY</th>
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</thead>
<tbody>
<tr>
<td>labour and delivery</td>
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<tr>
<td>care in hospital</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>infant feeding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>infant sleeping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>infant crying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>infant behaviour</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>baby immunisation</td>
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<td></td>
<td></td>
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<tr>
<td>parenting</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>mothers' feelings / emotional wellbeing</td>
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<tr>
<td>relationship with partner</td>
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<tr>
<td>domestic chores</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>coping with other children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mothers' sleep</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>mothers' diet</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>mothers' exercise</td>
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<tr>
<td>return to workforce</td>
<td></td>
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<td></td>
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</tbody>
</table>

Please explain reasons for your choice especially if ticked sometimes.

Appendix I, 3.2
Section D Continued: Discussion at the six week check

Please indicate the areas that you believe **SHOULD be discussed** at the routine postnatal review / six week check.
Place a tick in one column for each item listed.

<table>
<thead>
<tr>
<th></th>
<th>NEARLY ALWAYS</th>
<th>SOME-TIMES</th>
<th>RARELY</th>
<th>Please explain reasons for your choice especially if ticked sometimes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.</td>
<td>childcare</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18.</td>
<td>time out from baby</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19.</td>
<td>contraception</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20.</td>
<td>next pregnancy</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21.</td>
<td>financial issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22.</td>
<td>relaxation techniques</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23.</td>
<td>sexual issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24.</td>
<td>urine problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25.</td>
<td>back problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26.</td>
<td>tiredness/fatigue</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27.</td>
<td>pv bleeding / discharge</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28.</td>
<td>pelvic floor exercises</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>29.</td>
<td>bowel problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>30.</td>
<td>headaches</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>31.</td>
<td>other: please list</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section E
The following statements and questions relate to the role of the GP and other health professionals in the provision of postnatal care.

Please tick one box for each statement to show whether you agree or disagree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree strongly</th>
<th>Agree</th>
<th>Not certain</th>
<th>Disagree</th>
<th>Disagree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. women do not need to see a GP following childbirth unless they have specific problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. it is difficult for the GP to obtain advice from most maternity hospitals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. most women are happy with the way that GPs are providing postnatal care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. discharge summaries provided by maternity hospitals are usually very useful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. if postnatal depression occurs a visit to a GP is unlikely to make a great deal of difference</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. GPs should be able to deal with common breastfeeding problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. most newborn babies should be seen by a paediatrician</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. postnatal depression should usually be managed by a psychiatrist expert in the area</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. breastfeeding problems should usually be managed by a lactation consultant</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. obstetricians have an important role to play in postnatal care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. patient support groups eg: NMAA, PaNDA have little to offer postnatal women</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. the child health record is useful for the GP when providing postnatal care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The following questions require you to place a tick in a box or to write comments.

13. During the past month how many times have you had contact with any of the local Maternal and Child Health Nurses (MCHN)?
    - none □ 1
    - 1 □ 2
    - 2 - 3 □ 3
    - 4 - 5 □ 4
    - 6 or more □ 5

14. Who usually initiates that contact?
    - myself □ 1
    - MCHN □ 2
    - other □ 3 please explain________________________
Section E continued.

15. What was the reason for your most recent contact with the MCHN? _______

16. How would you describe the contact between yourself and the MCHN(s)?
   - very helpful
   - helpful
   - no help
   - unhelpful
   - very unhelpful

17. Are you aware of a Domiciliary Nursing service(s) in your area that provides care to postnatal mothers after leaving hospital?
   (if no go to Question 20)
   - Yes
   - No

18. Have you had any contact with a postnatal Domiciliary Nursing service?
   (if no go to Question 20)
   - Yes
   - No

19. How would you describe your contact with the postnatal Domiciliary Nursing service?
   - very helpful
   - helpful
   - no help
   - unhelpful
   - very unhelpful

20. What do you see as the major roles and responsibilities of a general practitioner when providing postnatal care? (please list in point form)
Section F
Listed below are problems that may be of concern in the postnatal period.

Please tick one box for each statement to show how confident you feel about dealing with the problem.

Beside the table is a column headed 'clinical update'. Place a tick in this column if you feel you would benefit from having the topic included in a GP clinical update program.

<table>
<thead>
<tr>
<th>1. perineal pain</th>
<th>Very confident</th>
<th>Fairly confident</th>
<th>not confident</th>
<th>clinical update</th>
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</thead>
<tbody>
<tr>
<td>2. urinary incontinence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. caesarean wound pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. constipation, haemorrhoids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. faecal incontinence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. vaginal discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. prolonged vaginal bleeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. tiredness and exhaustion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. back pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. mastitis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. nipple problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. low milk supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. postnatal depression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. contraception</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. issues relating to sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. relationship problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. neonatal jaundice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. infant vomiting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. parenting problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. immunisation concerns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. infant crying</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. others, please list</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix I, 3.2
### Section G

The following statements also relate to your knowledge and attitudes about postnatal care.

Please tick one box for each statement to show whether you agree or disagree.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Agree strongly</th>
<th>Agree</th>
<th>Not certain</th>
<th>Disagree</th>
<th>Disagree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am clear about what should take place at the six week check / routine postnatal review</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>a vaginal examination at the six week check / routine postnatal review will often reveal a problem that needs to be addressed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>most women should be advised to refrain from intercourse until after the six week check / routine postnatal review</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>a great deal of my knowledge about how to deal with breastfeeding problems comes from my personal experience of being a parent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>most women should be advised to refrain from all but gentle exercise in the 3 months following childbirth</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>most women should be encouraged to take iron supplements in the 3 months following childbirth</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>the opportunity for discussion and a thorough physical examination are of equal importance at the six week check / routine postnatal review.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>more postnatal problems could be prevented if GPs saw women within two weeks of leaving hospital</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>It is inappropriate for a GP (not present at delivery) to discuss with a mother the indication for her emergency caesarian section</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Section H: Practice arrangements for Postnatal care

This information will help to determine how GP’s undertake postnatal care and the adequacy of current medicare arrangements. These questions require you to write an answer or to place a tick in the box that indicates your response.

1. What item number do you usually charge for a routine postnatal visit / six week check in your practice for a recent mother?

2. What item number do you usually charge for a routine postnatal visit / six week check in your practice for a new baby?

3. Who is usually present at the routine postnatal review / six week check in your practice?

<table>
<thead>
<tr>
<th>always</th>
<th>sometimes</th>
<th>rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>mother</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>baby</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>father</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>siblings</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>others: please explain</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. What length of time do you usually book a mother / baby for a routine postnatal review / six week check?

<table>
<thead>
<tr>
<th>Time booked minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>mother</td>
</tr>
<tr>
<td>baby</td>
</tr>
</tbody>
</table>

5. How long do you usually spend with the mother and baby at a routine postnatal review / six week check?

<table>
<thead>
<tr>
<th>Time spent minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>mother</td>
</tr>
<tr>
<td>baby</td>
</tr>
</tbody>
</table>

6. What after hours service arrangements do you provide for recent mothers and their babies?

   - on call myself    1
   - practice roster on call    2
   - advise to go to local hospital 3
   - no routine arrangements 4
   - locum service     5
   - my home/mobile phone number 6
   - advise to contact MCHN after hours number 7

If you have ticked more than one option please explain why:______________________

Appendix I, 3.2

10
Section I: About yourself

All information provided will remain confidential.

Most questions can be answered by placing a tick in the box that indicates your preference, other items require you to write a response.

1. How many patients do you see in general practice in an average week?
   - < 50
   - 51 - 100
   - 101 - 180
   - 181 - 250
   - 251 - 300
   - > 300

2. How many hours do you work in general practice in an average week?
   - < 10
   - 11 - 30
   - 31 - 60
   - 61 - 90
   - > 90

3. Where is your practice located?
   - Melbourne metropolitan
   - Provincial city (> 15,000)
   - Large country town (6001 - 15,000)
   - Medium sized country town (2001 - 6000)
   - Small country town (< 2000)

4. How many years have you been in this practice location? ________

5. What is the postcode of your practice? ________

6. What type of practice do you work in?
   - solo
   - group
   - community health centre
   - other: please describe
7. Which age group do you belong to?

- 20-30 [ ]
- 31-40 [ ]
- 41-50 [ ]
- 51-60 [ ]
- 61-70 [ ]
- > 70 [ ]

8. In what year did you graduate from medicine? ________

9. Are you [ ] male or [ ] female?

10. Do you have children? Yes [ ] No [ ] (if No go to No. 12)

11. Please list the ages of your children________________________

12. Do you have any of the following qualifications? (tick the appropriate box/es)

- Diploma of Obstetrics [ ]
- Diploma of Child Health [ ]
- Lactation Consultant (IBLCE) [ ]
- Family planning certificate [ ]
- FRACGP [ ]
- Other: (please list) [ ]

13. Do you belong to any of the following groups? (tick the appropriate box/es)

- RACGP [ ]
- AMA [ ]
- Rural Doctors Association [ ]
- Doctors Reform society [ ]
- Local GP division [ ]
- Other (please list) [ ]

14. Please list any areas of special interest.

________________________

________________________

15. Are you a current member of the RACGP Training Program? Yes [ ] No [ ]

16. Have you completed a formal General Practice Training Program? Yes [ ] No [ ]

17. Are you listed on the Vocational or Fellows Register? Yes [ ] No [ ]

18. In your practice do you:

- universally bulkbill [ ]
- bulkbill card holders only [ ]
- charge all patients [ ]
- other (please explain) [ ]

Appendix I, 3.2
19. If there are any comments you would like to make please use the space below:
Would you like to receive feedback about this survey?

YOU MUST COMPLETE THESE DETAILS IF YOU WISH TO OBTAIN PRACTICE ASSESSMENT POINTS

If so, please write your postal address below. (This will be detached from the questionnaire prior to analysis, or you may send this back separately if you prefer)

Name:
Address:
Postcode:

QA NUMBER ______________ (if wishing to gain QA points)

Please return this survey as soon as possible.

A reply paid envelope has been enclosed for this purpose.

If you have misplaced your envelope the return address is:

Dr Jane Gunn
Reply Paid No: 1324
Private Box No: 4473
University of Melbourne
PARKVILLE 3052

Thank you for taking the time to complete this questionnaire.
Dear Doctor,

Re: 'The Role of the General Practitioner in Postnatal Care: a survey of providers.'

Two weeks ago we sent you a survey seeking your views on the role of the GP in providing postnatal care. We realise that you have many demands upon your time but your views are crucial to the success of this study, which addresses an important part of general practice that has been neglected to date. Return of a completed survey will entitle you to Practice Assessment (QA) points. Please complete the survey and return it in the reply paid envelope supplied. We will ensure that your confidentiality is maintained.

Thank-you.

Yours sincerely,

Dr Jane Gunn
MBBS, DipRACOG, FRACGP

Dr Judith Lumley
MA, MBBS, PhD, DCH, FAFPHM

Prof. Doris Young
MBBS, FRACGP

P.S. If you have responded to the survey, please disregard this postcard.

Please call 03-344 7276 if you have any queries.
August 24th, 1995

Dear Doctor,

    Late last year you took part in a survey of Victorian general practitioners about postnatal care. I am pleased to say that the survey was most successful, with a 70% response rate. This success was due to the participation of GP’s like yourself and I am most grateful for your time and comments.

    Enclosed with this letter is your long awaited individualised feedback from the survey. Three practice assessment points have been credited to you for this triennium. Please note that the results sent to you are for your private use only.

    I am more than happy to receive comments from you about the survey findings reported here. Also, if you are particularly interested in maternal and child health, physical problems following childbirth, breastfeeding and postnatal depression I would like to hear from you as I am keen to develop a network of GP’s with these special interests throughout Victoria. Please write or fax me:

    Dr Jane Gunn
    Dept. Public Health & Community Medicine
    University of Melbourne
    200 Berkeley St
    CARLTON  3053

    Fax: 03 9347 6136
    Phone: 03 9344 4530

Once again, many thanks for your involvement. Further analysis will be taking place on the GP survey and I hope to publish in GP-read journals.

Yours sincerely,

Jane Gunn

Appendix I, 3.4
A suggested approach to your feedback....

You may find it useful to read through your responses to each section and compare your choice to those of the ‘majority view’. Of course it may be that your view is more appropriate than the ‘majority view’. Therefore the next step is to read through the practice assessment report for each of the sections.

Do this systematically for each section and reflect on the following questions. It will be most educational if you actually write a response to each question for each section. You could photocopy this page for each section to make that task easier.

Are you surprised by your colleagues responses?

How does your answer compare to the report for that section?

What are the reasons for this (if there are differences)?

How does your actual practice differ from what you chose?

What changes (if any) will you make when you next see a postnatal woman?

What new things did you learn from this section?

What comments do you have about the section?

I would be most interested to receive your feedback as these are suggested guidelines only. If you send your feedback to me identify it by your survey code.
FEEDBACK ON SURVEY 'THE ROLE OF THE GP IN POSTNATAL CARE'

715 GP’s (70%) returned completed surveys. Listed below you will find the percentages of GP’s that chose each option. If percentages do not add to 100% it is because some GP’s left items blank. The option that you chose on the survey is shown in the far right column to enable you to compare your response to those of your colleagues. The results detailed here DO NOT REPRESENT THE CORRECT OR BEST WAY OF DOING THINGS they merely reflect what Victorian GP’s believe should be done.

**Examination of a recent mother**

(1=nearly always, 2=sometimes, 3=rarely, 9=blank)

<table>
<thead>
<tr>
<th></th>
<th>nearly always (%)</th>
<th>sometimes (%)</th>
<th>rarely (%)</th>
<th>your choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>check BP</td>
<td>88</td>
<td>10.5</td>
<td>1.3</td>
<td>1</td>
</tr>
<tr>
<td>check urine</td>
<td>43.9</td>
<td>33</td>
<td>22.2</td>
<td>2</td>
</tr>
<tr>
<td>take a pap smear</td>
<td>36.6</td>
<td>45.5</td>
<td>16.9</td>
<td>2</td>
</tr>
<tr>
<td>vaginal examination</td>
<td>77.2</td>
<td>13.8</td>
<td>8.5</td>
<td>1</td>
</tr>
<tr>
<td>assess pelvic floor</td>
<td>64.6</td>
<td>17.6</td>
<td>16.4</td>
<td>1</td>
</tr>
<tr>
<td>check weight</td>
<td>52.3</td>
<td>22.2</td>
<td>25.0</td>
<td>2</td>
</tr>
<tr>
<td>examine breasts</td>
<td>64.8</td>
<td>24.6</td>
<td>10.3</td>
<td>2</td>
</tr>
<tr>
<td>examine perineum</td>
<td>84.1</td>
<td>11.9</td>
<td>3.9</td>
<td>1</td>
</tr>
<tr>
<td>examine abdomen</td>
<td>90.2</td>
<td>6.2</td>
<td>3.2</td>
<td>1</td>
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</tbody>
</table>

**Examination of an infant**

(1=nearly always, 2=sometimes, 3=rarely, 9=blank)

<table>
<thead>
<tr>
<th></th>
<th>nearly always (%)</th>
<th>sometimes (%)</th>
<th>rarely (%)</th>
<th>your choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>weigh baby</td>
<td>32.7</td>
<td>16.4</td>
<td>49.7</td>
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</tr>
<tr>
<td>measure length</td>
<td>30.3</td>
<td>15.9</td>
<td>51.5</td>
<td>1</td>
</tr>
<tr>
<td>head circumference</td>
<td>39.2</td>
<td>17.1</td>
<td>41.0</td>
<td>1</td>
</tr>
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<td>heart</td>
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<td>0.6</td>
<td>0.1</td>
<td>1</td>
</tr>
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<td>eyes</td>
<td>95.7</td>
<td>1.7</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>hearing</td>
<td>51.0</td>
<td>12.7</td>
<td>33.6</td>
<td>1</td>
</tr>
<tr>
<td>hips</td>
<td>98.9</td>
<td>0.8</td>
<td>0.3</td>
<td>1</td>
</tr>
<tr>
<td>umbilicus</td>
<td>98.0</td>
<td>1.1</td>
<td>0.6</td>
<td>1</td>
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<td>genitals</td>
<td>97.8</td>
<td>1.3</td>
<td>0.4</td>
<td>1</td>
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<tr>
<td>reflexes</td>
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<td>13.4</td>
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<td>fontanelles</td>
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<td>1.0</td>
<td>0.4</td>
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<td>99.9</td>
<td>0.3</td>
<td>0.1</td>
<td>1</td>
</tr>
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<td>development</td>
<td>88.1</td>
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<td>5.5</td>
<td>1</td>
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</table>

Appendix I, 3.4
Discussion at the six week check  
(1=nearly always, 2=sometimes, 3=rarely, 9=blank)

<table>
<thead>
<tr>
<th></th>
<th>nearly always (%)</th>
<th>sometimes (%)</th>
<th>rarely (%)</th>
<th>your choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>labour and delivery</td>
<td>76.1</td>
<td>17.3</td>
<td>4.9</td>
<td>1</td>
</tr>
<tr>
<td>care in hospital</td>
<td>46.9</td>
<td>34.7</td>
<td>15.1</td>
<td>2</td>
</tr>
<tr>
<td>infant feeding</td>
<td>98.3</td>
<td>1.1</td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td>infant sleeping</td>
<td>87.1</td>
<td>10.3</td>
<td>2.1</td>
<td>1</td>
</tr>
<tr>
<td>infant crying</td>
<td>77.2</td>
<td>17.6</td>
<td>4.2</td>
<td>1</td>
</tr>
<tr>
<td>infant behaviour</td>
<td>79.0</td>
<td>14.8</td>
<td>4.9</td>
<td>2</td>
</tr>
<tr>
<td>immunisation</td>
<td>82.7</td>
<td>12.3</td>
<td>4.6</td>
<td>1</td>
</tr>
<tr>
<td>parenting</td>
<td>50.6</td>
<td>34.5</td>
<td>11.7</td>
<td>2</td>
</tr>
<tr>
<td>mother’s feelings/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>emotional wellbeing</td>
<td>86.7</td>
<td>9.7</td>
<td>2.7</td>
<td>2</td>
</tr>
<tr>
<td>relationship with partner</td>
<td>48.3</td>
<td>38.2</td>
<td>12.3</td>
<td>2</td>
</tr>
<tr>
<td>domestic chores</td>
<td>36.1</td>
<td>39.7</td>
<td>22.1</td>
<td>3</td>
</tr>
<tr>
<td>coping with other children</td>
<td>57.9</td>
<td>32.7</td>
<td>8.3</td>
<td>2</td>
</tr>
<tr>
<td>mother’s sleep</td>
<td>76.8</td>
<td>17.8</td>
<td>5.0</td>
<td>2</td>
</tr>
<tr>
<td>mother’s diet</td>
<td>64.8</td>
<td>26.7</td>
<td>7.7</td>
<td>2</td>
</tr>
<tr>
<td>mother’s exercise</td>
<td>58.2</td>
<td>30.9</td>
<td>10.1</td>
<td>2</td>
</tr>
<tr>
<td>return to work</td>
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Confidence at dealing with postnatal problems

(1=very confident, 2=fairly confident, 3=not confident, 9=blank)

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POSTNATAL CARE IN GENERAL PRACTICE

Report on Practice Assessment Activity

Standards
This survey has enabled the current views of Victorian GPs on postnatal care to be described. It is premature to suggest that the ‘majority view’ is the ‘correct view’. For this reason no firm guidelines can be developed as a result of this survey. Rather a suggested approach will be outlined drawing on the survey results and the current scientific literature in the area. Unfortunately the latter is scarce, hence these guidelines are preliminary only. GPs are invited to respond to these guidelines.

Examination of a recent mother
The examination at the 6 week check has a long tradition. To check that ‘all is back to normal’. This concept is of interest. Can ‘back to normal’ ever be achieved? The parous woman is certainly changed from the non-parous woman. Research undertaken in this area suggests that it is of NO benefit to undertake routine vaginal examinations(VE) as the findings of such examinations do not lead to ANY change in management. This research suggests that women should have a VE if they complain of symptoms (pain, discharge, prolonged bleeding). The survey findings suggest that GPs believe that routine VE is preferred, this needs to be reconsidered by most GPs.

This approach can be extended to the rest of the postnatal examination - urine, BP, abdominal examinations, perineal examination, breast examination, weight and pap smears should be done only if indicated. They should not be routinely performed as they do not result in altered management unless there has been an indication.

It will be important for GPs who undertake this approach to carefully communicate with the woman why they are or are not checking things. There are some women who believe that the VE is of major importance and feel that the GP has not been attentive if they do not do it. A number of authors have suggested that the focus of the six week check on the genital examination is in need of re-assessment.

Work by Gruis in the 1970’s suggested that women have problems with their body image following childbirth. Is taking the weight going to alleviate these concerns? It would appear better practice to talk to the woman about her concerns about her weight - if indeed she has any.

Examination of an infant
Unfortunately little research has been done to tell us whether these routine baby checks result in less morbidity for babies. It has been taken on trust that examination MUST be a good thing - but we do need to establish WHAT examination is useful and WHEN should it be done and by WHOM.

The GPs in the survey were more consistent in their views about the infant examination. Most checked the MCHN records to ensure that growth was acceptable. This makes common sense as a single weigh on a set of scales is of no relevance. It would seem good practice to examine the heart, fontanelles, eyes (for red reflex), hips, genitals, spine and general appearance. It is more practical to ASK if there are any hearing problems suspected or in the family and to refer if appropriate (hearing can be assessed at tertiary centres at very young ages and a parent’s concern should not be ignored).

Discussion at the six week check
This a very important topic that has been researched very little. Some have called for less examination and more time for discussion. Women speak glowingly of the GP ‘who really LISTENED to me’. We need to pay more attention to what we discuss with women following childbirth.

There is research to suggest that many women find it useful to talk about their experience of labour, childbirth and the ‘the hospital experience’. The community based GP would appear to be a suitable person for the woman to talk to. If the woman has concerns about this area it will probably be necessary for her to return for another time, perhaps without baby to allow unhindered discussion. Clarifying and listening at this time can be very beneficial for women. Only 76% of GPs agreed with the need to discuss labour/delivery and only 47% thought it was useful to discuss care in hospital. Yet much conflicting advice, especially about breastfeeding, is encountered by women.

Infant feeding is essential to inquire about. GPs should encourage breastfeeding yet support mother’s who choose to bottle feed. However failure to gain the support and advice necessary to successfully breastfeed should not be equated with choosing to bottle feed. GPs should be aware of local resources for breastfeeding women (other GPs, MCHN, Nursing Mothers’.

Appendix I, 3.4
lactation consultants). To increase the percentage of women breastfeeding at 3 months is a National Health Goal for the year 2000 - we have a long way to go. Unfortunately few GPs are well trained in breastfeeding and many are giving inappropriate advice. GPs should have access to education about breastfeeding to improve their knowledge and skills in this area.

Unhappiness following childbirth is a major problem for women. 15.4% of Victorian women suffer from postnatal depression each year. Simple supportive counselling / active listening has been shown to reduce the incidence of PND. GPs are well placed to offer this service. A mother’s feelings should be routinely asked about at the postnatal check, mothers do not volunteer that they feel miserable. In fact they often equate this with meaning that they are not a ‘good mother’. It may also be appropriate for the GP to give a woman ‘permission’ to have time out from her baby. Many women feel guilty about the need for this and as GPs we should discuss that this is OK and in fact may be a life buoy for the woman who is unhappy or anxious. Domestic chores can be a source of stress also and the need for ‘home-help’ should be considered for every woman who is finding difficulty in adjusting to the demands of her new role.

Other areas in this section that may need consideration by GPs are:

Sexual issues- many women have sexual symptoms following childbirth. Research in the USA has shown that sexual symptoms peak at 3 months following childbirth and as many as 20% of women may have symptoms which persist beyond 1 year postpartum. Research in the UK has shown that women are reluctant to seek help for these symptoms.

GPs should therefore raise the issue at the postnatal check and encourage women to report problems if they occur.

Coping with other children, relationship with partner- the birth of a child brings with it major changes to family dynamics. These changes may cause considerable stress within the family. The GP should inquire about the ‘family changes’ and how everyone is coping. If there are significant problems further visits may need to be arranged or referral to the appropriate person.

Physical problems- It is true to say that the ‘routine physical check’ of postnatal mothers needs to be re-examined. However physical problems following childbirth have been largely neglected despite the focus on physical examination. Unfortunately most of the problems are not likely to be found during the usual physical postnatal check. The common problems that have been ignored, yet result in significant postnatal morbidity for women, are extreme tiredness and fatigue, anaemia, haemorrhoids, constipation, breast symptoms, vaginal discomfort, backache, headache, stress incontinence, vaginal discharge, abnormal bleeding, UTI’s, stitch breakdown and side effects of epidurals.

Brief consideration of the list will show that most of these problems will be elicited on HISTORY. Hence the need for GPs to take a thorough history at the postnatal check for both physical and emotional symptoms.

Confidence at dealing with postnatal problems
This survey identified that GPs lack confidence in dealing with many common postnatal problems. In fact most items presented on the feedback sheet should be included in GP updates. Particular attention should be given to postnatal physical problems, breastfeeding problems, postnatal depression / unhappiness following childbirth, sexual issues, relationship and parenting issues and common neonatal problems.

A final word
Many GPs will feel that there is not enough time to do all that has been suggested. It would seem appropriate for a double appointment to be made for the postnatal check-up of the mother and an appointment made for the baby. Of course it is difficult if mother and baby turn up for one 15 minute appointment. It may be necessary to make reception staff aware of the need for the length of time you decide upon. Usually new mothers are known to the practice and at the end of the day we can only do what we can! However providing time and support following childbirth will no doubt lead to an enhanced doctor-patient relationship in the years to come and will increase the likelihood of continuing care for the woman and her family.

Appendix I, 3.4
APPENDIX II
This booklet contains information about the Postnatal Care Project which is underway at the hospital this year. Please feel free to read through this information when you have time.

The Postnatal Care Project is designed to determine whether an early routine postnatal visit to a GP at 1 week following hospital discharge results in better health outcomes for mothers than the routine 6 week check-up. This project is being undertaken by the University of Melbourne and the Centre for the Study of Mothers' and Children's Health in conjunction with Ballarat Base Hospital and Preston and Northcote Community Hospital. All eligible women will approached on the postnatal ward by a Research Assistant and invited to participate.

If you have any questions you can ask the Research Assistants (Marg Watts & Judy Parry) or the Project Co-ordinator (Jane Gunn - 03 344 4530).
Postnatal Care Project

A Randomised Controlled Trial

1. Summary

Women often encounter physical, emotional and breastfeeding problems in the postnatal period. Traditionally a routine six week postnatal check-up, often provided by general practitioners (GP's), has been recommended. There has been little research into the purpose or outcome of the postnatal check-up. This randomised clinical trial will address the issue of timing for the postnatal check-up and determine whether a visit 1 week after discharge rather than six weeks postpartum has an effect on mothers physical, emotional and breastfeeding experiences. Outcomes will be determined by mailed questionnaires at 3 and 6 months after birth consisting of the Edinburgh Postnatal Depression Scale, the Short Form 36, items on maternal problems and maternal satisfaction with postnatal care. A simple health diary will also be kept to follow women’s use of health care services in the six months following birth. Findings from the trial will have the potential to influence policy on the routine postnatal check-up and may lead to the establishment of guidelines for postnatal care in general practice.

2. Aims

To conduct a randomised clinical trial of an early postnatal visit (1 week after discharge) to a general practitioner(GP). Recruitment of women at Preston and Northcote Community Hospital and Ballarat Base Hospital will commence early 1995 and continue over a 12 month period.

Objectives: To determine if a visit to a GP 1 week after discharge rather than six weeks postpartum results in -
1. decreased rates of postnatal depression as scored by the Edinburgh Postnatal Depression Scale (EPDS) at 3 and 6 months postpartum
2. increased breastfeeding rates measured by self-report at 3 and 6 months postpartum
3. increased patient well-being as scored by the Short Form 36 (SF36) at 3 and 6 months postpartum
4. decreased rates of physical problems measured by self-report at 3 and 6 months postpartum
5. increased levels of satisfaction with general practice care at 3 and 6 months postpartum
6. decreased utilisation of health care providers as determined by patient kept health visits diary
7. better health outcomes for women who have the same GP throughout pregnancy and the postpartum
Implications:
This trial addresses three major public health issues in the six months following childbirth: postnatal depression, breastfeeding rates and maternal physical and emotional well-being.

The routine practice for recent mothers to have a six week postnatal check-up is questioned in this trial and the outcome of an earlier visit may lead to changes in policy. The relatively simple design would enable easy implementation within the current models of care.

This trial will help to clarify the role of the GP in postnatal care and may lead to the establishment of postnatal care guidelines for GP's.

It will provide, for the first time, information on the pattern of utilisation of health care providers by recent mothers in the six months following childbirth. Prevalence rates of postnatal depression, breastfeeding and postnatal physical problems will also be obtained.

Study group:

Dr Jane Gunn - PhD Candidate  
Dr Judith Lumley - Supervisor  
Associate Professor Doris Young - Supervisor

Reference Group:

Ms Anne Butler (Charge Nurse, Midwife PANCH)  
Ms Penny Brabin (Consumer Representative)  
Ms Anne Hindle (Maternal and Child Health Nurse)  
Ms Sarah Goding (Manager Home Based Programs, H&CS)  
Dr Chris Maxwell (Obstetrician & Gynaecologist)  
Dr Gloria Moscattini (General Practitioner)  
Dr John Stanton (GP Obstetrician)  
Dr Hubert Van Doorn (General Practitioner)
3. Background

The year following childbirth has not been widely researched. The main area of interest has been postnatal depression. In Australia, postnatal depression (PND) has been recognised as a major public health problem. A population based study in Victoria to determine the prevalence of PND found 15.4% of women to be depressed at 8 to 9 months postpartum using the Edinburgh Postnatal Depression Scale (EPDS score 13 or more). Reducing the severity and duration of PND is listed as a national health goal. However there is little current research based on interventions attempting to achieve this goal.

Breastfeeding has also been recognised as a major public health issue. The National Health and Medical Research Council and the Victorian Health and Community Services Department have issued guidelines to assist health professionals in encouraging breastfeeding. Eighty percent of mothers leave hospital breastfeeding; at three months this has dropped to 57%, at six months to 42%. These rates are much improved from the 1970's but remain below target levels.

Physical problems following childbirth have received little attention. Studies detailing the nature and prevalence of physical problems are scarce. A retrospective survey, using a convenience sample, of health after childbirth involving 11,701 women in the United Kingdom found that 63.9% of women had a health problem which had occurred within 3 months of the delivery and lasted at least 6 weeks. Stress incontinence was reported by 20.6%, low back ache by 18.7%, haemorrhoids by 17.6%, extreme tiredness by 17.1%, urinary frequency 9.4% and frequent headaches by 8.3%. A longitudinal study in the United States of 436 first-time mothers found similar problems.

There is no doubt that the postnatal period can be one of ill health. The role of health professionals in preventing, recognising and treating these problems has not been widely researched. In the study by MacArthur et al women were likely to consult a doctor for problems such as high blood pressure, dental problems, and migraine but for the other problems reported less than half consulted a doctor. This is especially surprising for problems such as stress incontinence and urinary frequency.

The six week postnatal check-up has traditionally been the time when a mother has visited her doctor. Little is known about its nature or impact on womens health after birth. We do not know whether the three areas outlined above are part of the postnatal check-up. There are no well researched guidelines for postnatal care. Most published articles about the postnatal check-up are opinion based. It has been suggested that the vaginal examination, a widely practiced routine at the postnatal check-up, is unnecessary without an indication. Checking for involution of the uterus has been one of the major reasons for the timing of the postnatal check-up. The concept of the postnatal check-up needs review.

Women report many sources of help in the early postnatal weeks. Many women visit general practitioners before their six week postnatal check-up. Unpublished Medicare data shows that the mean frequency of visits to a GP in the five weeks following birth is 1.1 per mother/baby. We do not know the reasons or outcome of these visits. A UK study found that women were less satisfied with GP care than with hospital staff, community midwife and health visitor care. We do not have this information for an Australian sample. It could be that the tradition of the six week check has sent a message to women that they should not need to see a doctor before this time and that if they feel they do there is probably nothing that can be done. This trial will test the impact of an early postnatal visit to a GP, at one week following discharge, on the incidence of postnatal depression, breastfeeding rates, physical problems, well-being and satisfaction with postnatal care.
4. Design

Randomised clinical trial

Intervention: Referral letter and appointment date for a postnatal visit to a GP one week after discharge

Control: Standard care: appointment date at six weeks with a GP

Entry criteria:

Inclusion criteria:
1. mothers of livebirth at 37 weeks or greater gestation as determined by dates or ultrasound if dates uncertain
2. public hospital patient
3. able to read and write English: able to complete entry questionnaire
4. consent to visit GP for postnatal check
5. no arrangements made for early review by GP
6. nominate own GP or choose from shared care providers
7. give informed consent
8. health of mother and baby permits same day discharge

Exclusion criteria:
1. women who choose to visit JG, HVD, JS, GM, DY
2. antenatal care provided by teenage clinic at Panch or Little Clinic at BBH (by hospital request)
3. delivery by emergency caesarean section at Panch

5. Specific Objectives

1. To reduce the mean score on the EPDS from 7.6 (population mean in the 1989 Victorian Consumer Survey) to < 6.5 at six months postpartum.
2. To increase breastfeeding rates by at least 15% at 3 months (from 50% to 65%).
3. To increase the mean scores across each domain of the Short Form 36. The sample size will permit the detection of shifts in scores across each domain of the SF 36 which are smaller than those described for GP attenders with mild problems compared with the population normative data in the UK.
4. To decrease the prevalence of physical problems at 3 and 6 months
5. To increase the satisfaction with GP care at 3 and 6 months
6. To reduce the number of visits made to health care providers in the 6 months following childbirth.
7. better health outcomes for women who have the same GP throughout pregnancy and the postpartum
Postnatal Care Project

Randomised Controlled Trial for PANCH

Selection of Eligible Mothers

Informed Consent

Eligibility Criteria:
* Public hospital patient
* Delivery at ≥ 37 weeks
* Mother and baby discharged on same day
* Mother able to read and write English
* Delivery: NVD, instrumental, elective LUSCS

Participants

Non-Participants

Randomisation

1 week postnatal visit to GP

Participants

Non-Participants

Data collection

6 week postnatal visit to GP

Participants

Non-Participants

Data collection

Some data collection
The time following birth is very special for you and your baby. Thank you for taking this time to read about our study.

At present most women have a ‘postnatal check-up’ about 6 weeks after childbirth, often with a general practitioner (GP). We do not know very much about the postnatal check-up or the best time for it to take place. That is why we have decided to do this study and are asking you to be involved.

We want to test out a new timing for the postnatal check-up at 1 week after leaving hospital. We do not know whether it will be better for women than the current 6 week check-up. All women giving birth at PANCH and Ballarat Base Hospital this year will be invited to take part in testing out the best timing for the postnatal check-up. We would be very pleased if you would agree to be involved.

This study is likely to lead to better care for mothers and babies after birth and your participation will help to make it happen.

On the back of this page you will find what would be expected of you if you agree to participate in this study. You can choose the GP you visit. We will ask you to visit your GP at either 1 week after leaving hospital or at 6 weeks after birth. The timing of the visit will be decided beforehand in a random way, a bit like tossing a coin.

If you agree to take part in the study you are still free to go to your GP or any other health care provider if you need to at any time. You are also free to withdraw at any time. If you do not have a GP we will help you to find one.

All information provided by you will remain confidential. It will be kept safe in a locked place at the University of Melbourne.

No information that identifies you will be given to your doctor or the hospital. Your care at the hospital or from your GP will not differ whether you agree to take part in this study or not.

Before you participate you will be asked to sign a form, agreeing to take part.

This study has been approved by the University and Hospital Ethics Committees and has been funded by a Commonwealth Government grant.

Thank-you for taking the time to read this information, from the research group:

Dr Jane Gunn and
Associate Professor Doris Young
Department of Public Health
and Community Medicine
The University of Melbourne

Dr. Judith Lumley
Centre for the Study of Mothers' and Children's Health
LaTrobe University
This pamphlet is to introduce myself and the Postnatal Care Project which is taking place at the hospital this year. Following your baby's birth you may be invited to take part in this project.

I am Dr Jane Gunn, a general practitioner and mother. I am part of a group undertaking research at the University of Melbourne into the care that general practitioners provide to mothers and their babies in the first six months after birth.

We are especially interested in the routine postnatal check-up which most women have about 6 weeks after having their baby.

We want to find out what mothers think of the postnatal check-up and the best time for it to happen. A research assistant or myself may ask you to be involved in the Postnatal Care Project which will test two timings for the postnatal check-up.

We look forward to meeting you and your new baby.

Dr Jane Gunn
General Practitioner
University of Melbourne
University of Melbourne
Appendix II, 4.4  

Postnatal Ward Poster.

Printed on 80g A3 paper in 38 font with large Trial Logo above and laminated.

The Postnatal Care Project is being undertaken by the University of Melbourne and the Centre for the Study of Mothers’ and Children’s Health, in conjunction with Ballarat Base Hospital and Preston & Northcote Community Hospital.

The Project is designed to determine the most appropriate time for women to have a postnatal check-up with their GP.

All eligible women will be approached on the postnatal ward and invited to participate.

Any questions? 
Please ring Dr Jane Gunn on 03) 344 4530
Postnatal Care Project

Recruitment of recent mothers: guidelines for RA's

1. Approach / ring the Charge Nurse to see if there are any possible participants.
   Ask: How many deliveries since last visit to recruit?
   Do any of these mothers fit our criteria?
   - Public Hospital Patient
   - Delivery at 37 weeks or more gestation
   - Baby has not been transferred / ill in SCN
   - Mother able to speak English (don't expect CN to be able to tell us if women able to read/write, we will have to determine this at recruitment)

2. Make an appropriate time to go to the ward. Always inform CN when you arrive.

3. Approaching the new mother.

   (the following is a guide only, we will all develop our own 'style'. However, we need to give basically the same message and answer questions with the same answers. At the beginning you will encounter hitches/problems. Please note down any comments/questions/suggestions etc after seeing a patient. Keep anything that you write down as it is really useful in building on and refining the recruitment procedure.)

   Hello xxxxxxx. I'm Jane Gunn / Marg Watts / Judy Parry a GP/ Midwife researcher who is working with the 'Postnatal Care Project' that is underway at the hospital this year. I was wondering if I could talk with you for a few minutes about the project? (if NO, try to make a convenient time and leave info sheet with them) If YES ......... build rapport by asking about baby etc etc (as if I need to suggest such tactics to 2 experienced midwives!) then when the time is right......

   The Postnatal Care Project (showing information sheet) is being undertaken by researchers from the University of Melbourne and the Centre for the Study of Mothers' and Children’s Health in conjunction with the hospital. We are trying to find out the best time for the postnatal check-up. At the moment most women go for a routine check-up about six weeks after childbirth. We do not really know whether 6 weeks is the best time for this to happen. To try to work out when the best time is we have started the postnatal care project and we are looking for mothers to be involved. I'd like to read through this sheet with you and see whether you would like to be a part of our project.

   Read through sheet with mother.
   Answer any questions.
Make sure the woman understands that:

- the group she is in will be chosen randomly, by ‘tossing a coin’ to ensure that every woman has an equal chance of being in either group.

- we are genuinely uncertain about which group will be the best one to be in and it is only through a study like this that we really be able to give mothers the answers about the best time for their check-up.

- they can visit/talk to anyone they want to for any problems they may have but we would like them to keep a record of this and will give them a special card to fill out each time they visit/telephone someone.

- they are under NO obligation to be a part of the project and if they refuse it will not alter the care they receive in ANY way.

4. Will they be involved

Once you are happy that the woman understands what is involved in the project it is time to gain her consent / refusal.

So, xxxxxxxx you can see that this study will help to answer some important questions about postnatal care. We would be most pleased to have you as a part of the project. Would you agree to be involved?

5. If they agree:

1. Sign consent form
2. Complete Entry form
3. Complete Entry Survey
4. Phone Randomisation Centre for allocation to group. Complete paperwork
5. Give woman package for 1 week after discharge or 6 weeks after birth.
6. Go through contents of package. PUT CODE NO. ON ALL ITEMS
7. Ensure she understands what she has to do.
8. Inform charge nurse of allocation to ensure smooth discharge planning.
9. Make sure paperwork is complete.
10. Jot down any comments you may have.

If they refuse:

Acknowledge that you understand and that it will in no way effect the care they will receive.

Complete Non-Participants sheet with them.

Appendix II, 4.5
Possible questions:

"Why can’t I choose which group I’m in?"

Well, thanks for asking that as I was going to go through that with you. In a study such as this where we are trying to work out a difference between two things (a 1 week vs a 6 week visit) we have to make sure that the two groups are made up of similar types of mothers and that the difference is not due to the way in which the groups were chosen. For instance all women who were induced may choose the 6 week group, if this happened we wouldn’t know whether the women were more successful at breastfeeding because they had the 6 week visit or because they were induced. Do you see what I mean, it would make the results confusing? If we choose which group a woman is in just by tossing a coin then she has an equal chance of being in either group and we avoid having a biased study or having results that are confusing.

"Which group is the best to be in?"

We really don’t know, that’s why we are doing the study. There will be good and bad points about each of the groups but it is impossible to say beforehand which group will suit most women the best. That is why we will get mothers to keep a record of their health contacts and send out surveys at 3 and 6 months and ask mothers about their health and views about their health care. At the end of the study we will be able to tell you which group is best or it may be that they are both the same or that some women will benefit and not others. We will send you information when the project is over to tell you about the results.

"What difference will it make?"

We really don’t know if it will make any difference or not. We will be looking to see if it makes a difference to mothers’ physical health, the way they feel, how they feel about the care they have been given, whether they breastfeed or have problems and we will ask mothers for any other comments they may have. In this way we feel that if the visit does make a difference then we are likely to find it. There will be 650 women in the project so we will find out a lot of information that will be useful in improving postnatal care in the future.
Appendix I, 4.6 Plain English Information Sheet for Women

Project Logo

The time following birth is very special for you and your baby. Thank you for taking this time to read about our study.

At present most women have a ‘postnatal check-up’ about 6 weeks after childbirth, often with a general practitioner (GP). We do not know very much about the postnatal check-up or the best time for it to take place. That is why we have decided to do this study and are asking you to be involved.

We want to test out a new timing for the postnatal check-up at 1 week after leaving hospital. We do not know whether it will be better for women than the current 6 week check-up. All women giving birth at PANCH and Ballarat Base Hospital this year will be invited to take part in testing out the best timing for the postnatal check-up. We would be very pleased if you would agree to be involved.

This study is likely to lead to better care for mothers and babies after birth and your participation will help to make it happen.

On the back of this page you will find what would be expected of you if you agree to participate in this study. You can choose the GP you visit. We will ask you to visit your GP at either 1 week after leaving hospital or at 6 weeks after birth. The timing of the visit will be decided beforehand in a random way, a bit like tossing a coin.

If you agree to take part in the study you are still free to go to your GP or any other health care provider if you need to at any time. You are also free to withdraw at any time. If you do not have a GP we will help you to find one.

All information provided by you will remain confidential. It will be kept safe in a locked place at the University of Melbourne.

No information that identifies you will be given to your doctor or the hospital. Your care at the hospital or from your GP will not differ whether you agree to take part in this study or not.

Before you participate you will be asked to sign a form, agreeing to take part.

This study has been approved by the University and Hospital Ethics Committees and has been funded by a Commonwealth Government grant.

Thank-you for taking the time to read this information, from the research group:

Dr Jane Gunn and
Associate Professor Doris Young
Department of Public Health and Community Medicine
The University of Melbourne

Dr. Judith Lumley
Centre for the Study of Mothers’ and Children’s Health
LaTrobe University
Appendix I, 4.6 Plain English Information Sheet for Women

Summary

If you agree to be involved you will be asked to:

1. Visit a GP **one week after leaving hospital** for a check-up

   or

   Visit a GP **six weeks** after the birth of your child for a check-up

2. Keep a record of any visits or telephone calls that you may have to a GP, Maternal Child Health Nurse, hospital, paediatrician, obstetrician, psychologist, physiotherapist etc during the six months following childbirth.

3. Complete and return a questionnaire that will be sent to you at 3 months and 6 months following the birth of your baby.

   This is all that will be required of you for this study.

   If you have any questions please ring:

   Dr Jane Gunn: (03) 344 - 4530
Postnatal Care Project

Participant (Informed Consent)

Entry Survey (completed by RA)

Mother and baby discharged

1 week postnatal visit to GP

6 week postnatal visit to GP

Health Contacts Card

3 month survey will be mailed to you

6 month survey will be mailed to you

Appendix II, 4.7
Diagram used during recruitment
Consent form for participation in a clinical trial

Name of participant: ________________________________

Project title: Postnatal Care Project: when should the postnatal check-up be done?

Name of investigators: Dr. Jane Gunn
Department of Public Health and Community Medicine. University of Melbourne
Dr. Judith Lumley
Centre for the Study of Mothers’ and Children’s Health.
Dr. Doris Young
Associate Professor, Department of Public Health and Community Medicine. University of Melbourne

1. I consent to participate in the above project, the details of which have been explained to me.

2. I authorise the investigator or her assistant to include me in the clinical trial referred to under 1. above.

3. I acknowledge that:
   (a) I have been informed that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied
   (b) The project is for the purpose of research.
   (c) I have been informed that the confidentiality of the information I provide will be safeguarded.
   (d) I have read the information sheet explaining the trial and had any questions answered.

Signature: ________________________________ Date __________
Appendix II, 4.9  
Postnatal Care Project  
Record of Non-participants  

Printed on 80g ‘cosmic yellow’ A4 paper

Date of refusal __/__/__

This form is to be completed for all women who REFUSE to participate in the project.

Introduction:
Thanks for considering this project, we understand that you prefer not to take part. Would you mind if I just ask you a few questions that will help us to make sure that the women who are in the project are similar to all the women who give birth at the hospital. It will only take a couple of minutes and that would be all I asked of you.

Place a tick in the box if the woman is unhappy to answer questions   ☐

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>Is this your first baby?</td>
<td>yes  no</td>
</tr>
<tr>
<td>(b)</td>
<td>If no, how many babies have you had altogether?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Did you have twins?</td>
<td>yes  no</td>
</tr>
<tr>
<td>3.</td>
<td>When your baby was born, what did she/he weigh?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>grams  pounds  oz</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>How was your baby born?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>normal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>caesarean</td>
<td></td>
</tr>
<tr>
<td></td>
<td>forceps / vacuum</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>MOTHER’S date of birth?</td>
<td><strong>/</strong>/__</td>
</tr>
<tr>
<td>6.</td>
<td>What is the postcode where you live?</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>What made you decide NOT to be involved with this project?</td>
<td></td>
</tr>
</tbody>
</table>
Appendix II, 4.10

**Postnatal Care Project Entry Form**

*Printed on 80g 'skylark violet' A4 paper*

**Code number**

Hospital UR Number: ______________

Allocation: 1 week visit □ 6 week visit □ Date of postnatal check-up: ___/___/___

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong></td>
<td><strong>Date of recruitment</strong></td>
<td>/ /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.</strong></td>
<td><strong>Date of Discharge</strong></td>
<td>/ /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3.</strong></td>
<td><strong>Date of birth of child</strong></td>
<td>/ /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4.</strong></td>
<td><strong>Mothers' name</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5.</strong></td>
<td><strong>Address</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>6.</strong></td>
<td><strong>Telephone number</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eligible for trial:</strong></td>
<td>Public Hospital Patient □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gestation ≥ 37 weeks □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consent to visit GP for postnatal check-up □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>able to complete surveys in English □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>health of mother and baby permits discharge □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>able to nominate own GP or choose from list □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8.</strong></td>
<td><strong>Not eligible for trial:</strong></td>
<td>If you tick any of the following items this woman must be excluded from the trial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Panch only:</strong></td>
<td>Emergency Caesarean Section performed □</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Antenatal care provided by teenage clinic □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>prior arrangements for early review by GP □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9.</strong></td>
<td><strong>Consent signed:</strong></td>
<td>Yes □</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10.</strong></td>
<td><strong>Given:</strong></td>
<td>Letter &amp; info sheet for GP □</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fridge magnet &amp; postcard □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'Health Contacts Diary □ Information sheet □</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>11.</strong></td>
<td><strong>Completed entry survey</strong></td>
<td>Yes □</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix II, 4.11

Postnatal Care Project

Survey of Mothers at entry to the trial

To be administered by recruitment officer
Section A: About you and your baby

A1. (a) On what date was your baby born?

Day  Month  Year

(b) What was the expected or due date for the birth?

Day  Month  Year

A2. Did you have twins or triplets?

Yes, had twins  
Yes, had triplets  
No, had a single baby  

(If you did have twins or triplets please fill in the questionnaire for each child, marking first baby, second baby etc. beside the answers to any questions to which you think it applies.)

A3. Is your baby a girl or a boy?

Girl  
Boy  

A4. Is this your first baby?

Yes  
No  

If NO, how many babies have you had altogether? 

A5. When your baby was born, what did she or he weigh?

POUNDS  OZS  OR  GRAMS
Section B: Your pregnancy

B1. We are interested in where you went for your routine check-ups in pregnancy.

(a) Were you part of a Shared Care Program with a GP? where you go to a local GP for most check-ups with some visits to the hospital.

Yes □
No □

(b) Were most of your visits to the public hospital antenatal clinic?

Yes □
No □

(c) Were most of your visits to a Midwives clinic at the hospital?

Yes □
No □

B2. Were you admitted to hospital at any stage during your pregnancy, apart from when you went into labour?

Yes □
No □

Please describe why you were admitted and how many days you spent in hospital

________________________________________________________
________________________________________________________
________________________________________________________

Appendix II, 4.11
B3. Did you attend any antenatal or childbirth education classes?

Yes ■
No, but have in the past ■
No, never have ■

B4. How did your labour begin?

It started by itself, with labour pains/contractions ■
and/or waters breaking ■
It was started off or induced by a doctor or midwife ■
No labour, (elective caesarean) ■

B5. Did you have an epidural? (injection in your back to relieve pain)

Yes ■
No ■

B6. How was your baby born?

normal birth ■
caesarian birth ■
forceps or vaccum assisted birth ■

B6. (a) Did you have an episiotomy (cut)?

Yes had an episiotomy ■
No, but I had a tear ■
No, I didn’t have an episiotomy or a tear ■
Don’t know ■

(b) Did you have to have stitches?

Yes, had stitches ■
No ■
Section C: Since the birth

C1. Are you breastfeeding your baby?

Yes □

Yes, but baby has had some bottle feeds as well □

I tried it, but I have stopped now □

No, bottle feeds only □

C2. How are you finding breastfeeding at the moment?

It is going really well □

It is going OK □

It is fairly difficult □ prompt ‘do you feel you need help?’

would you like me to mention it to the nurses? □yes

Not breastfeeding □

C2. How long do you plan to breastfeed your baby for?

________________________________________________________________________
Section D: About your GP

D1. (a) Do you have a regular GP (someone that you see most of the time?)

Yes □

No □

(b) If you answered No, please explain (and then go to ....)

________________________________________

________________________________________

D2. In the year BEFORE you became pregnant

(a) how many times did YOU visit a GP for an issue concerning YOURSELF?

__________

(b) how many times did YOU visit a GP for an issue concerning your children?

__________  no other children □
Section E: About you and your family

E1. What is your date of birth? ____/____/____

E2. Are you.....

- Married
- Living with a partner or boyfriend
- Divorced or separated
- Widowed
- Single

E3. What is the name of the country where you were born?

________________________________________

E4. (a) Is English your first language?

- Yes
- No

E5. When did you leave school?

- Completed secondary school to Year 12
- Attended secondary school but did not complete final year
- Attended primary school only
- Did not attend school

E6. Have you completed further study since leaving school?

- Yes, finished a degree
- Yes, finished a diploma
- Yes, finished an apprenticeship or traineeship
- No, none of these
E7. How many cigarettes do you smoke a day?

- None ☐
- 1-9 ☐
- 10-20 ☐
- 21-40 ☐
- More than 40 ☐

E8. What job did you do before having this baby?

________________________________________________________

E9. (a) Do you plan on going back to work?

Yes ☐
No ☐

(b) If Yes, when do you plan to go back to work?

________________________________________________________

E9. What job does your partner have?

________________________________________________________

No partner ☐
Partner unemployed ☐

E10. Do you have any comments about this project? (Please record any comments the woman may volunteer about the survey or trial in general)

________________________________________________________

________________________________________________________

Thanks very much for your time and involvement in the Project.

E11. Any comments from the recruitment officers (please note any comments, impressions, ideas etc that you may have since recruiting this woman below).

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Appendix II, 4.11
Appendix II, 4.12   Example of page from Randomisation Schedule

<table>
<thead>
<tr>
<th>Code No</th>
<th>Week</th>
<th>Date Recruited</th>
<th>Mother’s Hospital UR Number</th>
<th>Mother’s Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2003</td>
<td>1</td>
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<td>2005</td>
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<tr>
<td>2006</td>
<td>6</td>
<td></td>
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<tr>
<td>2007</td>
<td>1</td>
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<tr>
<td>2008</td>
<td>6</td>
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<tr>
<td>2009</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dear Doctor

Re: ____________________________

has agreed to take part in the ‘Postnatal Care Project’. This is a randomised clinical trial to investigate the best timing for the routine postnatal check-up. An information sheet outlining the trial is included with this letter.

and her baby have been assigned to have a postnatal check-up on __/__/__, which is six weeks since birth.

It is hoped that this postnatal check-up will be a time to check on the physical, emotional and social well-being of this mother and her baby in an effort to prevent problems and provide ongoing support.

No further visits are required as part of this trial.

This trial has been approved by the University of Melbourne and participating Hospital Ethics Committees. It has been funded by the General Practice Evaluation Program.

Should you wish to discuss any aspects of this trial you can contact me on (03) 344-4530.

Thank-you for your co-operation.

Yours sincerely,

Dr Jane Gunn
MBBS, DRACOG
FRACGP

Assoc. Professor Doris Young
General Practice Unit

Dr. Judith Lumley
Centre for the Study of Mothers’
and Children’s Health
LaTrobe University
Dear Doctor

Re: ____________________________________

has agreed to take part in the 'Postnatal Care Project'. This is a randomised clinical trial to investigate the best timing for the routine postnatal check-up. An information sheet outlining the trial is included with this letter.

and her baby have been assigned to have a postnatal checkup on __/__/__, which is one week since leaving hospital.

It is hoped that this postnatal check-up will be a time to check on the physical, emotional and social well-being of this mother and her baby in an effort to prevent problems and provide ongoing support. A vaginal examination is not required at this time unless medically indicated.

No further visits are required as part of this trial. This visit will replace the six week check-up; unless you arrange otherwise.

This trial has been approved by the University of Melbourne and participating Hospital Ethics Committees. It has been funded by the General Practice Evaluation Program.

Should you wish to discuss any aspects of this trial you can contact me on (03) 344-4530.

Thank-you for your co-operation.

Yours sincerely,

Dr Jane Gunn
MBBS, DRACOG FRACGP

Assoc. Professor Doris Young
General Practice Unit

Dr. Judith Lumley
Centre for the Study of Mothers’
and Children's Health
LaTrobe University
**Health Contacts Card**

When you or your baby visit or telephone a GP/Local Doctor, Maternal & Child Health Nurse/ baby health centre, Pharmacist/Chemist, Physiotherapist, Specialist, Social Worker, Hospital, Nursing Mothers Association, Community Health Centre etc. we would like you to fill out this card.

Do not write the persons name; just their title. Two examples are shown below.

<table>
<thead>
<tr>
<th>Date</th>
<th>Reason For Contact</th>
<th>Person / organisation contacted (please say if it was a visit or a telephone call)</th>
<th>Comments</th>
<th>Office use only</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/95</td>
<td>I had a cold</td>
<td>visited Chemist/Pharmacist</td>
<td>didn't need any medicine</td>
<td></td>
</tr>
<tr>
<td>12/1/95</td>
<td>Baby not sleeping</td>
<td>visited GP/local doctor</td>
<td>checked baby, advice re feeding and coping with new baby</td>
<td></td>
</tr>
</tbody>
</table>

Please send this card back with the questionnaire you will get from us when your baby is about 6 months old.

If you need another card call Jane Gunn on 03-9344 4330 and I will send you one.

*The Health Contacts Card was printed on 200g buff card, folded in three with the Trial Logo printed on front*

Appendix II, 4.15
Appendix II, 4.16

Change of address card

Printed on 200g ‘buff’ card, DL size, with Trial Logo on front

If during the next six months you change your address we would like you to complete this card and return it to us.

My Name
My New Address is ________________________________

My New Phone Number is ________________________________

Thanks for your participation,

Jane Gunn
20 July, 1997

«Firstname» «Lastname»
«Street»
«Suburb» «Postcode»

Dear «Firstname»,

It is three months since you agreed to be involved in the Postnatal Care Project. We hope that things have been going well for you and your baby.

Enclosed with this letter you will find a survey for you to complete and return to us as soon as possible (you do not need a stamp). The survey asks about your postnatal check-up with your GP and any problems you may have had as well as how you are at the moment. Please try to answer all the questions as it will help us to work out when the postnatal check-up should be done.

In the survey we ask you questions about your GP; by this we mean your general practitioner, local doctor or family doctor.

Please return your completed ‘Health Contacts Card(s)’, along with the completed survey, in the reply paid envelope supplied as soon as possible.

You will also find enclosed a replacement ‘Health Contacts Card’ for you to record all the telephone calls or visits you may have to your GP, Maternal and Child Health Nurse, hospital etc over the next three months.

All information you provide to us remains confidential.

If you have any questions please ring me on (03) 9 344 4530.

We are most grateful for your time and interest in this project. A final survey will be sent to you when your baby is 6 months old.

Kindest regards from the Postnatal Care Project team,

Jane Gunn
General Practitioner
Postnatal Care Project
Thank-you for being involved in the Postnatal Care Project.

Please fill out the survey and return it in the reply paid envelope supplied as soon as possible.

Please read the questions carefully and follow the instructions given. There are no right answers, just put what is right for you.

Your answers will remain confidential.

If you have any questions, ring Jane Gunn on - (03) 9344 4530

Section A.  THE FIRST THREE MONTHS

A1. How many days did you stay in hospital when your baby was born? (count the day your baby was born as 1 day)

______ days

A2. Were you visited by a midwife/nurse from the hospital during your first few days at home? (Do not include home visits from your maternal and child health nurse / baby health centre nurse)

Yes, midwife/nurse visited one or more times \[\square\]
No, not at all \[\square\]

The following questions ask about the check-up you had with a GP after you went home (your postnatal check-up). It does not include any check-ups you may have had whilst you were in hospital.

A3. (a) When did you go for your check-up with a GP after leaving hospital?

About 1 week after leaving hospital \[\square\]
About 6 weeks after my baby was born \[\square\]
Didn't go for a check-up at another time \[\square\], go to A8
please say when

Visited someone else \[\square\], go to A4
please say where and when
A5. Did you discuss any of the following at your check-up after leaving hospital?

*Please tick ONE box for each item.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes, in detail</th>
<th>Yes, a little</th>
<th>No, not at all</th>
<th>not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) labour and birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) care in hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) feeding the baby</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) baby's behaviour / crying / sleeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) contraception</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) physical problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) my feelings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) help with housework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) help with baby</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(j) relationships</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(k) sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(l) diet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(m) exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n) childcare</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(o) going back to work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(p) stitches checked</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(q) going back to work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(r) blood tests taken / ordered</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(s) abdomen / tummy examined</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(t) other, please describe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A4. Did any of the following things happen at your check-up after having your baby? *Please tick all that apply*:

- urine test
- blood pressure taken
- weighed
- breasts examined
- internal / vaginal examination
- stitches checked
- pap smear taken / smear test
- abdomen / tummy examined
- blood tests taken / ordered

(b) which of the following apply to you?

- It was the same GP I had visited for most of my check-ups in pregnancy
- It was a GP I had seen occasionally during pregnancy
- It was a GP I had seen before, but not during my pregnancy
- It was a new GP

(c) Was the GP you visited male or female?

- Male
- Female
A6. On balance, how would you describe your check-up after leaving hospital? *Please tick only one*

- Very good □
- Good □
- Mixed □
- Poor □
- Very poor □

A7. Thinking about your check-up after leaving hospital, what were you particularly happy about?

(a) ____________________________________________________________________________

(b) ____________________________________________________________________________

A8. Has your baby had any problems feeding?

- Yes, quite a lot □
- Yes, sometimes □
- No, none □

A9. (a) What sort of feeds is your baby having now?

- Still having breast feeds □, go to A10
- Has formula from a bottle or cup □

(b) If you started to breast feed and have stopped, how old was your baby when you stopped?

Number of completed weeks __________

A10. (a) Has your baby had any health problems or problems with development?

- Yes □
- No □

(b) If YES, please describe

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________
There are two parts to following question.  
Please check that you answer both parts.

A11. Have you talked to any of the people listed below about caring for your baby since you have been at home?

<table>
<thead>
<tr>
<th>If YES tick box</th>
<th>If YES how helpful were they?</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) your maternal and child health nurse</td>
<td>very helpful</td>
</tr>
<tr>
<td>(b) your GP</td>
<td>very helpful</td>
</tr>
<tr>
<td>(c) maternal and child health nurse from after hours telephone service</td>
<td>very helpful</td>
</tr>
<tr>
<td>(d) midwife/nurse who visited you at home</td>
<td>very helpful</td>
</tr>
<tr>
<td>(e) a doctor from the hospital</td>
<td>very helpful</td>
</tr>
<tr>
<td>(f) a hospital midwife from labour ward/postnatal ward</td>
<td>very helpful</td>
</tr>
<tr>
<td>(g) an obstetrician</td>
<td>very helpful</td>
</tr>
<tr>
<td>(h) a paediatrician</td>
<td>very helpful</td>
</tr>
<tr>
<td>(i) family and friends</td>
<td>very helpful</td>
</tr>
<tr>
<td>(j) Nursing Mothers' Association</td>
<td>very helpful</td>
</tr>
<tr>
<td>(k) Others (please list)</td>
<td>very helpful</td>
</tr>
</tbody>
</table>

IF TALKED TO NO ONE, PLEASE TICK □

There are two parts to the following question.  
Please check that you answer both parts.

A12. Thinking about your OWN health and how you have been feeling since the birth, has any of the following been a problem for you?

If YES tick box

(please tick all that apply)

<table>
<thead>
<tr>
<th>If you talked to a GP about the problem, how helpful were they?</th>
</tr>
</thead>
<tbody>
<tr>
<td>very helpful</td>
</tr>
<tr>
<td>(a) soreness where you had a tear or episiotomy</td>
</tr>
<tr>
<td>(b) pain from caesarean wound</td>
</tr>
<tr>
<td>(c) Incontinence (loss of bladder control)</td>
</tr>
<tr>
<td>(d) bowel problems (constipation or loss of control)</td>
</tr>
<tr>
<td>(e) haemorrhoids</td>
</tr>
<tr>
<td>(f) feeling tired and exhausted</td>
</tr>
<tr>
<td>(g) more coughs, colds or other minor illnesses than usual</td>
</tr>
<tr>
<td>(h) backache</td>
</tr>
<tr>
<td>(i) mastitis (fever caused by infection in your breasts)</td>
</tr>
<tr>
<td>(j) painful nipples</td>
</tr>
<tr>
<td>(k) not enough breastmilk</td>
</tr>
<tr>
<td>(l) feeling depressed or very unhappy for more than a few days</td>
</tr>
<tr>
<td>(m) birth control / contraception</td>
</tr>
<tr>
<td>(n) sex</td>
</tr>
<tr>
<td>(o) relationship with your partner</td>
</tr>
<tr>
<td>(p) losing weight</td>
</tr>
<tr>
<td>(q) adjusting to demands of a new baby</td>
</tr>
<tr>
<td>(r) other (please describe)</td>
</tr>
</tbody>
</table>
There are two parts to the following question. Please check that you answer both parts.

A11. Have you talked to any of the people listed below about caring for your baby since you have been at home?

If YES ___________ tick box

(please tick all that apply)

IF YES ___________ how helpful were they?

very helpful | fairly helpful | not helpful

(a) your maternal and child health nurse
(b) your GP
(c) maternal and child health nurse from after hours telephone service
(d) midwife/nurse who visited you at home
(e) a doctor from the hospital
(f) a hospital midwife from labour ward/postnatal ward
(g) an obstetrician
(h) a paediatrician
(i) family and friends
(j) Nursing Mothers' Association
(k) Others (please list)

IF TALKED TO NO ONE, PLEASE TICK □

A12. Thinking about your OWN health and how you have been feeling since the birth, has any of the following been a problem for you?

If YES ___________ tick box

(please tick all that apply)

(a) soreness where you had a tear or episiotomy
(b) pain from caesarean wound
(c) incontinence (loss of bladder control)
(d) bowel problems (constipation or loss of control)
(e) haemorrhoids
(f) feeling tired and exhausted
(g) more coughs, colds or other minor illnesses than usual
(h) backache
(i) mastitis (fever caused by infection in your breasts)
(j) painful nipples
(k) not enough breastmilk
(l) feeling depressed or very unhappy for more than a few days
(m) birth control / contraception
(n) sex
(o) relationship with your partner
(p) losing weight
(q) adjusting to demands of a new baby
(r) other (please describe)
A13. Have you talked to any of the people listed below about your own health since you have been at home?

<table>
<thead>
<tr>
<th>If YES</th>
<th>If YES how helpful were they?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>very helpful</td>
</tr>
<tr>
<td>(a) your maternal and child health nurse</td>
<td></td>
</tr>
<tr>
<td>(b) a GP / local doctor</td>
<td></td>
</tr>
<tr>
<td>(c) maternal and child health nurse from after hours telephone service</td>
<td></td>
</tr>
<tr>
<td>(d) midwife/nurse who visited you at home</td>
<td></td>
</tr>
<tr>
<td>(e) a hospital midwife from labour ward/postnatal ward</td>
<td></td>
</tr>
<tr>
<td>(f) an obstetrician</td>
<td></td>
</tr>
<tr>
<td>(g) a paediatrician</td>
<td></td>
</tr>
<tr>
<td>(h) a hospital doctor</td>
<td></td>
</tr>
<tr>
<td>(i) family and friends</td>
<td></td>
</tr>
<tr>
<td>(j) Nursing Mothers’ Association</td>
<td></td>
</tr>
<tr>
<td>(k) Others (please list)</td>
<td></td>
</tr>
</tbody>
</table>

If talked to no one, please tick □

There are two parts to this question. Please check that you have answered both.

A14. Please look at the following questions and for each one think about how you have been feeling in the last week.

(a) During the last week I have been able to see the funny side of things:
   - As much as I always could □
   - Not quite so much now □
   - Definitely not so much now □
   - Not at all □

(b) During the last week I have looked forward with enjoyment to things:
   - As much as I ever did □
   - Rather less than I used to □
   - Definitely less than I used to □
   - Hardly at all □

(c) During the last week I have blamed myself unnecessarily when things went wrong:
   - Yes, most of the time □
   - Yes, some of the time □
   - Not very often □
   - No, never □

(d) During the last week I have felt anxious or worried for no good reason:
   - No, not at all □
   - Hardly ever □
   - Yes, sometimes □
   - Yes, very often □
During the last week I have been so unhappy that I have been crying
Yes, most of the time
Yes, quite often
Only occasionally
No, never

During the last week I have felt scared or panicky for no good reason
Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

During the last week I have felt sad or miserable
Yes, most of the time
Yes, quite often
Not very often
No, not at all

During the last week things have been getting on top of me
Yes, most of the time I haven’t been able to cope at all
Yes, sometimes I haven’t been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever

During the last week I have been so unhappy that I have had difficulty sleeping
Yes, most of the time
Yes, sometimes
Not very often
No, not at all

During the last week the thought of harming myself has occurred to me
Yes, quite often
Sometimes
Hardly ever
Never

A15. Is there anyone you can talk to about how you have been feeling since the birth of your baby? (you may tick more than one response)
Yes, but I’m not sure they understand
Yes, and they are very supportive
No, there isn’t anyone I can really talk to
I don’t particularly want to talk about how I feel
There isn’t anything I feel I need to talk about
Other (please say what)
Section B  The following questions ask for your views about your health, how you feel and how well you are able to do your usual activities.

Some of the questions are similar to those in the last section. We hope you will not find it tedious. By answering both sets of questions it will help us to get a more complete picture of mothers' health after birth.

Answer every question by marking the answer as indicated (place a circle around the answer that suits you). If you are unsure about how to answer a question, please give the best answer you can.

B1. In general, would you say your health is:

   (circle one)

   Excellent 1
   Very good 2
   Good 3
   Fair 4
   Poor 5

B2. Compared to one year ago, how would you rate your health in general now

   (circle one)

   Much better now than one year ago 1
   Somewhat better now than one year ago 2
   About the same as one year ago 3
   Somewhat worse now than one year ago 4
   Much worse now than one year ago 5

B3. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

   (circle one number on each line)

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Yes limited a lot</th>
<th>Yes limited a little</th>
<th>No, not limited at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Lifting or carrying groceries</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Climbing several flights of stairs</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Climbing one flight of stairs</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Bending, kneeling, or stooping</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Walking more than one kilometre</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Walking half a kilometre</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Walking 100 metres</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Bathing or dressing yourself</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### B4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

<table>
<thead>
<tr>
<th>(circle one number on each line)</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cut down on the <strong>amount of time</strong> you spent on work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>b. Accomplished <strong>less</strong> than you would like</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c. Were limited in the <strong>kind</strong> of work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>d. Had difficulty performing the work or other activities (for example, it took extra effort)</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### B5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

<table>
<thead>
<tr>
<th>(circle one number on each line)</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cut down on the <strong>amount of time</strong> you spent on work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>b. Accomplished <strong>less</strong> than you would like</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c. Didn't do work or other activities as <strong>carefully</strong> as usual</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### B6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

<table>
<thead>
<tr>
<th>(circle one)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>1</td>
</tr>
<tr>
<td>Slightly</td>
<td>2</td>
</tr>
<tr>
<td>Moderately</td>
<td>3</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>4</td>
</tr>
<tr>
<td>Extremely</td>
<td>5</td>
</tr>
</tbody>
</table>

### B7. How much **bodily** pain have you had during the past 4 weeks?

<table>
<thead>
<tr>
<th>(circle one)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No bodily pain</td>
<td>1</td>
</tr>
<tr>
<td>Very mild</td>
<td>2</td>
</tr>
<tr>
<td>Mild</td>
<td>3</td>
</tr>
<tr>
<td>Moderate</td>
<td>4</td>
</tr>
<tr>
<td>Severe</td>
<td>5</td>
</tr>
<tr>
<td>Very severe</td>
<td>6</td>
</tr>
</tbody>
</table>

### B8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

<table>
<thead>
<tr>
<th>(circle one)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>1</td>
</tr>
<tr>
<td>A little bit</td>
<td>2</td>
</tr>
<tr>
<td>Moderately</td>
<td>3</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>4</td>
</tr>
<tr>
<td>Extremely</td>
<td>5</td>
</tr>
</tbody>
</table>
B9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks -

<table>
<thead>
<tr>
<th>a. Did you feel full of life?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Have you been a very nervous person</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>c. Have you felt so down in the dumps that nothing could cheer you up?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>d. Have you felt calm and peaceful?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>e. Did you have a lot of energy?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>f. Have you felt down?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>g. Did you feel worn out?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>h. Have you been a happy person?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>i. Did you feel tired?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

B10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?

<table>
<thead>
<tr>
<th>(circle one)</th>
<th>All of the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B11. How TRUE or FALSE is each of the following statements for you?

<table>
<thead>
<tr>
<th>(circle one number on each line)</th>
<th>Definitely true</th>
<th>Mostly true</th>
<th>Don't know</th>
<th>Mostly false</th>
<th>Definitely false</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I seem to get sick a little easier than other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. I am as healthy as anybody I know</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. I expect my health to get worse</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. My health is excellent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Section C: About Yourself

C1. (a) Since having the baby have you gone back to work in a paid job or to study?
   - Yes, gone back to a paid job [ ]
   - Yes, taken up some further study [ ]
   - No, not studying or working in a paid job [ ]

(b) If YES, how many hours a week does this involve you being away from the baby?
   [ ] ___________________________ hours

C2. How many cigarettes do you smoke a day?
   - none [ ]
   - 1-9 [ ]
   - 10-20 [ ]
   - 21-40 [ ]
   - more than 40 [ ]

C3. How do you feel about having to fill out the 'Health Contacts Card'
   - It is quite enjoyable [ ]
   - It is neither good nor bad [ ]
   - It is a bit of a nuisance [ ]
   - It is really annoying [ ]
   - I can't remember it [ ]

C4. How many of your visits or telephone calls have you been able to record on your 'Health Contacts Card'
   - All of them [ ]
   - Most of them [ ]
   - Some of them [ ]
   - Hardly any at all [ ]
   - None [ ]

Whether you have completed the card or not we would like you to post it back with this completed survey in the envelope supplied as soon as possible.
Thank you very much for completing this questionnaire.
We are grateful for the time and effort you have taken.

We will be sending you a final questionnaire when your baby is 6 months old.

Do you plan to change your address or telephone number in the next few months?
If so, please write your NEW address and phone number below

________________________________________

________________________________________

________________________________________

Phone: (___) __________________________

Please...
post back this survey and completed
‘Health Contacts Card’ in the envelope supplied
as soon as possible. You don’t need a stamp.

thank-you

Jane Gunn
Thank-you for being involved in the Postnatal Care Project.

Please fill out the survey and return it in the reply paid envelope supplied as soon as possible.

Please read the questions carefully and follow the instructions given. There are no right answers, just put what is right for you.

Your answers will remain confidential.

If you have any questions, ring Jane Gunn on (03) 9344 4530

Section A: FROM THREE TO SIX MONTHS

A1. In the past 3 months has your baby had any problems feeding?

Yes, quite a lot □
Yes, sometimes □
No, none □

A2. (a) What sort of feeds is your baby having now?

Having breast feeds □, go to A3
Having formula □
Both breastfeeding and formula □, go to A3

(b) If you started to breastfeed and have stopped, how old was your baby when you stopped?

Number of completed weeks

Appendix II, 4.19
A3. (a) Has your baby had any health problems or problems with development?

Yes □

No □

(b) If YES, please describe

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

A5. In the PAST MONTH have you talked to any of the people listed below about caring for YOUR BABY?

If YES ____________________________________________________________

tick box

If YES how helpful were they?

very helpful fairly helpful not helpful

(a) your maternal and child health nurse (baby health centre nurse)

(b) your GP / local doctor

(c) maternal and child health nurse from after hours telephone service

(d) midwife/nurse who visited you at home

(e) a doctor from the hospital

(f) a hospital midwife from labour ward/postnatal ward

(g) an obstetrician

(h) a paediatrician

(i) family and friends

(j) Nursing Mothers' Association

(k) Others (please list)

A4. Has your baby had the recommended immunisations?

Immunisations are the injections that are recommended for babies to prevent some of the common childhood illnesses like measles and whooping cough.

Please tick ONE box on EACH line.

Yes No Don't know

a) 2 month dose given □ □ □

b) 4 month dose given □ □ □

c) 6 month dose given □ □ □

If TALKED TO NO ONE, PLEASE TICK □
A6. Thinking about your own health and how you have been feeling over the PAST MONTH, has any of the following been a problem FOR YOU?

If YES tick box

(please tick all that apply)

(a) soreness where you had a tear or episiotomy
(b) pain from caesarean wound
(c) incontinence (loss of bladder control)
(d) bowel problems (constipation or loss of control)
(e) haemorrhoids
(f) feeling tired and exhausted
(g) more coughs, colds or other minor illnesses than usual
(h) backache
(i) mastitis (fever caused by infection in your breasts)
(j) painful nipples
(k) not enough breastmilk
(l) feeling depressed or very unhappy for more than a few days
(m) birth control / contraception
(n) sex
(o) relationship with your partner
(p) losing weight
(q) adjusting to demands of a new baby
(r) adjusting to demands of my other children
(s) other (please describe)

If NO PROBLEMS, PLEASE TICK 

A7. Have you talked to any of the people listed below about YOUR OWN HEALTH in the PAST MONTH?

If YES tick box

If you talked to a GP about the problem, how helpful were they?

(please describe)

If TALKED TO NO ONE, PLEASE TICK 

There are two parts to this question. Please check that you have answered both.
A8. Please look at the following questions and for each one think about how you have been feeling in the last week.

(a) During the last week I have been able to see the funny side of things:
   - As much as I always could □
   - Not quite so much now □
   - Definitely not so much now □
   - Not at all □

(b) During the last week I have looked forward with enjoyment to things:
   - As much as I ever did □
   - Rather less than I used to □
   - Definitely less than I used to □
   - Hardly at all □

(c) During the last week I have blamed myself unnecessarily when things went wrong
   - Yes, most of the time □
   - Yes, some of the time □
   - Not very often □
   - No, never □

(d) During the last week I have felt anxious or worried for no good reason
   - No, not at all □
   - Hardly ever □
   - Yes, sometimes □
   - Yes, very often □

(e) During the last week I have felt scared or panicky for no good reason
   - Yes, quite a lot □
   - Yes, sometimes □
   - No, not much □
   - No, not at all □

(f) During the last week things have been getting on top of me
   - Yes, most of the time I haven't been able to cope at all □
   - Yes, sometimes I haven't been coping as well as usual □
   - No, most of the time I have coped quite well □
   - No, I have been coping as well as ever □

(g) During the last week I have been so unhappy that I have had difficulty sleeping
   - Yes, most of the time □
   - Yes, sometimes □
   - Not very often □
   - No, not at all □

(h) During the last week I have felt sad or miserable
   - Yes, most of the time □
   - Yes, quite often □
   - Not very often □
   - No, not at all □
Section B  The following questions ask for your views about your health, how you feel and how well you are able to do your usual activities.

Some of the questions are similar to those in the last section. We hope you will not find them tedious. By answering both sets of questions it will help us to get a more complete picture of mothers' health after birth.

Answer every question by marking the answer as indicated (place a circle around the answer that suits you). If you are unsure about how to answer a question, please give the best answer you can.

B1. In general, would you say your health is:

(circle one)

Excellent  1
Very good  2
Good  3
Fair  4
Poor  5

B2. Compared to one year ago, how would you rate your health in general now

(circle one)

Much better now than one year ago  1
Somewhat better now than one year ago  2
About the same as one year ago  3
Somewhat worse now than one year ago  4
Much worse now than one year ago  5
B3. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Yes limited a lot</th>
<th>Yes limited a little</th>
<th>No, not limited at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c. Lifting or carrying groceries</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>d. Climbing several flights of stairs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>e. Climbing one flight of stairs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>f. Bending, kneeling, or stooping</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>g. Walking more than one kilometre</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>h. Walking half a kilometre</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>i. Walking 100 metres</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>j. Bathing or dressing yourself</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

B4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health? (circle one number on each line)

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cut down on the amount of time you spent on work or other activities</td>
<td>1</td>
</tr>
<tr>
<td>b. Accomplished less than you would like</td>
<td>1</td>
</tr>
<tr>
<td>c. Were limited in the kind of work or other activities</td>
<td>1</td>
</tr>
<tr>
<td>d. Had difficulty performing the work or other activities (for example, it took extra effort)</td>
<td>1</td>
</tr>
</tbody>
</table>

B5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)? (circle one number on each line)

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cut down on the amount of time you spent on work or other activities</td>
<td>1</td>
</tr>
<tr>
<td>b. Accomplished less than you would like</td>
<td>1</td>
</tr>
<tr>
<td>c. Didn't do work or other activities as carefully as usual</td>
<td>1</td>
</tr>
</tbody>
</table>
B6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

(circle one)

Not at all 1
Slightly 2
Moderately 3
Quite a bit 4
Extremely 5

Six-month postal survey

B7. How much bodily pain have you had during the past 4 weeks?

(circle one)

No bodily pain 1
Very mild 2
Mild 3
Moderate 4
Severe 5
Very severe 6

B8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

(circle one)

Not at all 1
A little bit 2
Moderately 3
Quite a bit 4
Extremely 5

B9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks -

<table>
<thead>
<tr>
<th>(circle one number on each line)</th>
<th>All of the time</th>
<th>Most of the time</th>
<th>A good bit of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Did you feel full of life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>b. Have you been a very nervous person</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>c. Have you felt so down in the dumps that nothing could cheer you up?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>d. Have you felt calm and peaceful?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>e. Did you have a lot of energy?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>f. Have you felt down?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>g. Did you feel worn out?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>h. Have you been a happy person?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>i. Did you feel tired?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Appendix II.4.19
B10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?

(circle one)

- All of the time: 1
- Most of the time: 2
- Some of the time: 3
- A little of the time: 4
- None of the time: 5

B11. How TRUE or FALSE is each of the following statements for you?

(circle one number on each line)

<table>
<thead>
<tr>
<th></th>
<th>Definitely true</th>
<th>Mostly true</th>
<th>Don't know</th>
<th>Mostly false</th>
<th>Definitely false</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I seem to get sick a little easier than other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. I am as healthy as anybody I know</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. I expect my health to get worse</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. My health is excellent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Section C: Care from General Practitioners

The following questions ask for your views about the care that you have received from general practitioners (GPs) / local doctors / family doctors.

C1. In the last six months (since the birth of your baby) how many times have you visited a GP/local doctor for an issue concerning yourself?

___________ times

C2. In the last six months how many times have you visited a GP/local doctor for an issue concerning your baby?

___________ times

C3. a) Do you visit the same clinic or surgery if you need to see a doctor?

- Yes, always ☐
- Yes, mostly ☐
- Sometimes ☐
- No, hardly ever ☐, go to question C6
b) For how long have YOU been attending this clinic or surgery?

- 1 year or less
- more than 1 year - 3 years
- more than 3 years - 5 years
- more than 5 years

C4. Does the clinic you usually visit provide home visits?
(a GP from the clinic will visit you at home)

- Yes, if I ask
- Only if doctor thinks it is needed
- No, not provided
- Don't know

C5. (a) Does the clinic you usually go to provide care after hours and on weekends?

- Yes
- No
- Don’t know

(b) If YES, which of the following apply
you may tick more than one

- My doctor is usually available after hours
- The doctors take turns at being available after hours
- The clinic uses a Locum service after hours
- Other (please explain)

C6. (a) Does the clinic you usually go to provide care after hours and on weekends?

- Yes
- No
- Don’t know

(b) If YES, which of the following apply
you may tick more than one

- My doctor is usually available after hours
- The doctors take turns at being available after hours
- The clinic uses a Locum service after hours
- Other (please explain)
C6. The following statements are about the care you have received from GPs/Local doctors since the birth of your baby.

Thinking about the GP(s) you USUALLY visit please tick ONE box on EACH line to show whether you agree or disagree.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I can usually get to see a GP when I need to</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. The GPs I see are willing to spend time with me</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. The GPs I visit hardly ever listen to my concerns</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. The GPs I visit understand the way I have been feeling since the birth</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. When I visit the GP with my baby s/he always asks me how I am</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f. I am unhappy with the way that GPs explain things to me</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g. The GPs I visit are good at dealing with young babies</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h. I am confident that the GPs I see would know if I was feeling depressed</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i. I am confident that the GPs I see would know if my baby had a serious illness</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

C7. On balance, how would you describe the care you have received from GPs / local doctors since your baby's birth?

Please tick only one

- Very good
- Good
- Mixed
- Poor
- Very poor

C8. Thinking about your visits to the GP what are you

(a) particularly happy about?

________________________________________

________________________________________

________________________________________

(b) particularly unhappy about?

________________________________________

________________________________________

________________________________________
Section D: About Yourself

D1. (a) Since having the baby have you gone back to work in a paid job or to study?
- Yes, gone back to a paid job □
- Yes, taken up some further study □
- No, not studying or working in a paid job □, go to D2

(b) If YES, how many hours a week does this involve you being away from the baby?
- none □
- less than 10 hours a week □
- 10 - 20 hours per week □
- more than 20 hours per week □

D2. How many cigarettes do you smoke a day?
- none □
- 1-9 □
- 10-20 □
- 21-40 □
- more than 40 □

D3. When have you had Pap / Smear Tests taken? A pap test is taken to prevent cancer of the cervix (neck of the womb) by detecting changes early.

Please tick ALL that apply
- since I have had the baby □
- when I was pregnant with the baby □
- before I was pregnant with the baby □
- never had one □
- don't remember □
When you agreed to take part in this study you were given a 'Health Contacts Card' to record all the visits or telephone calls you made to a GP, Maternal & Child Health Nurse, hospital etc. Below are some questions about the 'Health Contacts Card'.

D4. How do you feel about having to fill out the 'Health Contacts Card'?
   - It is quite enjoyable [ ]
   - It is neither good nor bad [ ]
   - It is a bit of a nuisance [ ]
   - It is really annoying [ ]
   - I can't remember it [ ]

D5. How many of your visits or telephone calls (for you and your baby) have you been able to record on your 'Health Contacts Card'?
   - All of them [ ]
   - Most of them [ ]
   - Some of them [ ]
   - Hardly any at all [ ]
   - None [ ]

Whether you have completed the card or not we would like you to post it back with this completed survey in the envelope supplied as soon as possible.

A final say........Thinking about your involvement in the Postnatal Care Project do you have any comments to make about the routine postnatal check-up or care from GPs when you have a new baby? Please use the space below, you can add extra pages if you wish.
Thank you very much for completing this questionnaire.

We are grateful for the time and effort you have taken.

Do you plan to change your address or telephone number in the next few months?

If so, please write your NEW address and phone number below so we will be able to send you a letter about the results of the project.

________________________________________
________________________________________
________________________________________

Phone: (____) _________________________

Please...
post back this survey and completed
'Health Contacts Card' in the envelope supplied
as soon as possible. You don't need a stamp.

thank-you

Jane Gunn
Appendix II, Thank-you for participating letter. Sent on recruitment to trial.

20 July, 1997

«Firstname» «Lastname»
«Street»
«Suburb» «Postcode»

Dear «Firstname»,

I am writing to thank-you for agreeing to be a part of the Postnatal Care Project. Your involvement will mean that more is known about women’s health after childbirth, in particular the postnatal check-up.

Please do not hesitate to contact me if you have any questions or if you need another Health Contacts Card.

We are most grateful for your time and interest in this project. A survey will be sent to you when your baby is 3 months old.

I hope you and your baby are settling in to life at home!

Kindest regards from the Postnatal Care Project team,

Jane Gunn
General Practitioner
Postnatal Care Project

Appendix II, 4.20
Thank-you for your involvement with the Postnatal Care Project.

It has been one week since we sent you a survey as part of the Postnatal Care Project. We have not yet received your reply. (If you posted it in the last few days please ignore this card).

We know that you are busy but we would be most grateful if you could fill out the survey and return it as soon as possible.

Please ring (03) 9344 4530 if you have not received the survey or you have any questions.

Kind regards,

Dr. Jane Gunn
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Appendix II, 4.22
Excel follow-up spreadsheet


<table>
<thead>
<tr>
<th>Week Code</th>
<th>Date first found</th>
<th>Date first sent</th>
<th>Date first reminder was sent</th>
<th>Reminder 1</th>
<th>Reminder 2</th>
<th>Phone of reminder card 1st</th>
<th>Phone of reminder card 2st</th>
<th>Rate survey 1 received</th>
<th>Rate survey 2 received</th>
<th>XCard 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>6/03/95</td>
<td>8/03/95</td>
<td>4/05/95</td>
<td>3/05/95</td>
<td></td>
<td></td>
<td></td>
<td>10/05/95</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0002</td>
<td>6/03/95</td>
<td>8/03/95</td>
<td>4/05/95</td>
<td>3/05/95</td>
<td>17/05/95</td>
<td>17/05/95</td>
<td>c</td>
<td>24/05/95</td>
<td>p</td>
<td>1</td>
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<tr>
<td>0003</td>
<td>6/03/95</td>
<td>8/03/95</td>
<td>4/05/95</td>
<td>3/05/95</td>
<td>17/05/95</td>
<td>17/05/95</td>
<td>c</td>
<td>24/05/95</td>
<td>p</td>
<td>1</td>
</tr>
<tr>
<td>0004</td>
<td>7/03/95</td>
<td>8/03/95</td>
<td>30/04/95</td>
<td>3/05/95</td>
<td>17/05/95</td>
<td>17/05/95</td>
<td>c</td>
<td>24/05/95</td>
<td>p</td>
<td>2</td>
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Appendix II, 4.22
Excel follow-up spreadsheet
It is two years since the Postnatal Care Project began and we would like to thank you once again for taking part.

You will remember that you were asked to have a postnatal check-up with your GP. Some women went one week after leaving hospital while others went at the traditional time of six weeks after giving birth. We were interested to find out the best time for the postnatal check-up.

We also asked you to fill out two questionnaires as well as keep a record of your visits to doctors and other health professionals.

We finished asking women to take part in the project in December 1995. It took us until August 1996 to collect all the questionnaires from women involved in the trial. Since that time we have been analysing the results.

Included in this pamphlet is a summary of our results. If you would like to know more about the study please contact Jane Gunn on 03 9344 4530.

Your participation in the project was very much appreciated and we hope you enjoy reading about the results.

Dr Jane Gunn & A/Prof Doris Young,
Department of Public Health &
Community Medicine
University of Melbourne; in conjunction with

Prof. Judith Lumley,
Centre for the Study of Mothers’ and Children’s
Health LaTrobe University

Who took part in the Postnatal Care Project?

Six hundred and eighty three women from Preston and Northcote Community Hospital and Ballarat Base Hospital agreed to take part in the project. Four hundred and seventy-six women returned a questionnaire.

Three hundred and forty-one women were asked to have a postnatal check-up one week after leaving hospital. Three hundred and forty-two women were asked to have a postnatal check-up six weeks after their baby was born.

Which check-up was the best?

Whether you went to a one week or a six week check-up, there were no differences in:

- the number of women who breastfed their baby
- the number of women who became depressed
- the physical health and well-being of women
- the level of satisfaction with general practice care
- the level of satisfaction with the postnatal check-up

Jane Gunn  Judith Lumley  Doris Young
To examine or not to examine?

There appears to be confusion as to whether an internal examination and pap smear should be done at the postnatal check-up. Research suggests that an internal examination should only be done if the woman has a problem, like prolonged bleeding, smelly discharge or pelvic pain. Pap smears should be done only if it is two years since the last smear or you have had an abnormal pap smear result in the past.

Where to from here?

Results from this study will be reported to the General Practice Evaluation Program and the Royal Australian College of General Practitioners who funded the study.

Talks have been, and will continue to be, given to general practitioners and others involved in caring for mothers and babies.

We also hope to publish the findings in medical journals, medical newspapers and women’s magazines.
Author/s:
Gunn, Jane Maree

Title:
The role of the general practitioner in postnatal care: an early intervention study

Date:
1997

Citation:

Publication Status:
Unpublished

Persistent Link:
http://hdl.handle.net/11343/36745

File Description:
The role of the general practitioner in postnatal care: an early intervention study

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